IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

POWER INTEGRATIONS, INC., Plaintiff, v. FAIRCHILD SEMICONDUCTOR INTERNATIONAL, INC., FAIRCHILD SEMICONDUCTOR CORPORATION, and SYSTEM GENERAL CORPORATION, Defendants.	)	C.A. No. 08-309-JJF

DEFENDANTS' OPENING MEMORANDUM OF POINTS AND AUTHORITIES IN SUPPORT OF THEIR MOTION FOR A MORE DEFINITE STATEMENT; OR, IN THE ALTERNATIVE, MOTION TO DISMISS; OR, MOTION TO STRIKE WILLFULNESS ALLEGATIONS

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I. INTRODUCTION

Plaintiff Power Integrations, Inc.'s ("Power Integrations") complaint fails to identify the accused products, the asserted claims, or the allegedly infringing acts. *See* D.I. 1. Indeed, the complaint does not even identify who has supposedly infringed Power Integrations' patents. *Id.* Consequently, Defendants wrote seeking additional information that would permit them to respond to the complaint. Because Power Integrations has refused to provide this information, Defendants have no choice but to seek the assistance of the Court. Pursuant to Federal Rule of Civil Procedure 12(e), Power Integrations should be compelled to provide a more definite statement about its infringement allegations. If Power Integrations is unwilling or unable to do so, the complaint should be dismissed.

In its complaint, Power Integrations states (without any support) that Defendants infringe by making, using, selling, offering to sell, and/or importing "devices" "covered by one or more claims" of the asserted patents. This allegation is broad enough to cover every single one of Defendants' products and all 75 claims in the three asserted patents. Thus, to respond to the complaint Defendants could be forced to apply all of these claims to all of their products (as well as considering the invalidity of all 75 claims). Clearly, Power Integrations has no basis or intention of asserting all such claims or accusing all such products and it is unreasonable to force Defendants to go through such an analysis to respond to Power Integrations' overbroad complaint.

Before involving the Court, Defendants sought to resolve this issue directly with Power Integrations and requested additional information (such as the accused products and asserted claims) that would permit Defendants to respond to the complaint in a meaningful manner. Tacitly conceding that the allegations in its complaint were overbroad, Power Integrations limited the accused products to "those products with 'frequency jitter' (or 'dither' or 'hopping', or however Fairchild chooses to label it) and/or an output power limit feature using a variable current limit signal (sometimes referred to in Fairchild/SG documents as a 'Vlimit ramp')...." Power Integrations, however, has refused to amend its complaint to limit the accused products in

a similar manner. Thus, Defendants are in the unreasonable situation where to respond in good faith to the complaint, they must consider in their answer products without the features that Power Integrations now admits are required for infringement.

At the same time that Power Integrations is refusing to identify the accused products to the Court or to Defendants, Power Integrations has been writing Defendants' customers claiming that 21 specific parts – ***identified by part number*** – are the subject of this litigation. Since Power Integrations has such information, there is no excuse for its refusal to provide it in its complaint.

Given the parties' history, Power Integrations' refusal to provide a definite statement of its infringement allegations is particularly wrongful. Two of the asserted patents have already been litigated in this Court and have claims that have been thus far rejected by the Patent Office during reexamination. Thus, Power Integrations is intimately familiar with these patents, their claims, and the accused products. To satisfy its Rule 11 burden, Power Integrations must have a good faith basis to believe that certain specific products infringement specific claims. Power Integrations should amend its complaint and provide this information so that Defendants can reasonably prepare a response. "Assuming plaintiff has properly investigated his claim before filing suit, there is no reason not to inform the defendant precisely which products are at issue." *Bay Indus., Inc. v. Tru-Arx Mfg., LLC*, 2006 WL 3469599 at *2 (E.D. Wis. Nov. 29, 2006).

II. BACKGROUND

A. Power Integrations Already Asserted The '851 And '876 Patents.

In its complaint, Power Integrations alleges infringement of three patents – U.S. Patent Nos. 6,107,851 ("'851 patent"), 6,249,876 ("'876 patent"), and U.S. Patent No. 7,110,270 ("'270 patent") (collectively, "patents-in-suit"). Power Integrations previously accused Defendants Fairchild Semiconductor International, Inc. and Fairchild Semiconductor Corporation (collectively, "Fairchild") of infringing the '851 and '876 patents in *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc. and Fairchild Semiconductor Corp.*, Civil Action No. 04-1371 JJF (D. Del.), which was also before this Court. *See* D.I. 2 (Notice of Related Cases).

In that earlier litigation, Power Integrations originally asserted 14 claims from the '851 and '876 patents. Power Integrations withdrew its assertions on a number of these claims and went to trial on only three claims from the '851 and '876 patents. Ultimately, a jury determined that the accused Fairchild products infringed those claims and awarded Power Integrations damages for such infringement.

B. The Patent Office Is Reexamining The Validity Of The '851 And '876 Patents.

On November 9, 2006, Fairchild Semiconductor, Inc. requested *ex parte* reexaminations of claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 of the '851 patent and claims 1, 17, 18, and 19 of the '876 patent in view of certain prior art references that were not present during the prior examination of the patents. Exs. 1 and 2. This included ***all*** of the claims that Power Integrations has ever asserted against Fairchild.

In December 2006, the Patent Office granted the requests for reexamination, finding that substantial new questions of patentability were raised by the new prior art references. Exs. 3 and 4. On April 7, 2008, the Patent Office rejected all claims of the '851 and '876 patents upon which reexamination was requested, under 35 U.S.C. §§ 102 and/or 103. Exs. 5 and 6. These *ex parte* reexaminations are still pending.

C. Power Integrations Refused To Explain The Scope Of Its Infringement Allegations.

Given the prior litigation and the pending reexaminations, Power Integrations' latest allegations of infringement are particularly unclear. For instance, is Power Integrations accusing the exact same products already found to infringe and for which it has been awarded damages? Or is Power Integrations, instead, seeking to assert claims that that the Patent Office has rejected as invalid against new products? Perhaps Power Integrations is reasserting the claims it dropped during the earlier litigation. The complaint provides no explanation about Power Integrations' infringement allegations.

Without such information, Defendants cannot reasonably respond to the complaint. Thus, on June 19, 2008, Defendants wrote Power Integrations and requested an identification of

the asserted claims and the accused products. As Defendants explained, "this information is particularly necessary since two of the three asserted patents and a number of Fairchild devices have already been litigated. Thus, we are unsure whether Power Integrations seeks to assert the same claims, accuse the same products, or means something else." Ex. 7.

Receiving no response to this letter, Defendants wrote again on June 27, 2008:

> Th[e] information is necessary for us to respond to the complaint in a meaningful way since two of the three asserted patents were already litigated between the parties and are being reexamined by the Patent Office. Thus, we are at a loss to understand whether Power Integrations is asserting the same claims it previously litigated (and that have been rejected by the Patent Office) or different claims. Similarly, we do not understand whether Power Integrations is accusing the same products at issue in the previous litigation or new products.
>
> We assume that Power Integrations had a good faith basis in filing this complaint and, thus, can identify the asserted claims and accused products. If so, we would appreciate this information… so that we can… prepare our response to the complaint. If Power Integrations either does not have or refuses to provide this information, we would appreciate at least the courtesy of a response.

Ex. 8.

On June 30, 2008, Power Integrations responded but refused to identify the accused products. Tacitly recognizing that it is not accusing all of Defendants' products, Power Integrations limited its infringement allegations to products with particular features:

> Suffice to say we are accusing of infringement all Fairchild/SG parts that use the patented features, specifically those products with 'frequency jitter' (or 'dither' or 'hopping', or however Fairchild chooses to label it) and/or an output power limit feature using a variable current limit signal (sometimes referred to in Fairchild/SG documents as a 'Vlimit ramp'), regardless of the part numbers and/or suffixes Fairchild/SG now uses.

Ex. 9. While Power Integrations identified "representative" claims, it refused to identify the asserted claims, stating that "other claims will be identified in due course during discovery."[1] *Id.*

[1] The "representative" claims of the '851 and '876 patents have all rejected by the Patent Office during the ongoing reexamination proceeding.

D. Power Integrations Provided Additional Information To Fairchild's Customers.

While refusing to tell the Court or Defendants which products are accused, Power Integrations has written to Defendants' customers and identified 21 accused parts ***by part number***:

> In the new lawsuit, we believe at least the following Fairchild (SG) parts infringe our patents:

SGP100	SGP400	SG6842J
SG6842JHV	SG6848	SG6849
SG6849A	SG6850	SG6858
SG6859	SG6859A	SG6860
SG5701	SG5841	SG5841J
SG5842	SG5842J	SG5848
SG6741	SG6742	FSEZ1216

Ex. 10. Power Integrations proceeded to threaten Defendants' customers should they continue to use these accused products:

> Any customer using these products for end products imported into, offered for sale, or sold in the U.S. will potentially be subject to liability for patent infringement. Power Integrations has no plans to initiate any action against any of its customers, but we want you to be aware of the potential ramifications of continued use of infringing Fairchild (SG) parts in your designs.

Id. The letter is signed by Clifford J. Walker, Vice President of Corporate Development. *Id.*

III. LEGAL STANDARDS

The Supreme Court recently held that a complaint must include factual allegations – not just a "blanket assertion" or unsupported allegation:

> Rule 8(a)(2)... requires a 'showing,' rather than a blanket assertion, of entitlement to relief. Without some factual allegation in the complaint, it is hard to see how a claimant could satisfy the requirement of providing not only 'fair notice' of the nature of the claim, but also 'grounds' on which the claim rests.... Rule 8(a) 'contemplate[s] the statement of circumstances, occurrences, and events in support of the claim presented' and does not authorize a pleader's 'bare averment that he wants relief and is entitled to it'.

Bell Atlantic Corp. v. Twombly, 127 S.Ct. 1955, 1965-66 (2007). To meet this standard, Power Integrations must amend its complaint and identify (i) the accused products, (ii) the asserted

claims, (iii) the allegedly infringing activities of each Defendant, and (iv) the basis for its allegations that this infringement was willful.

Under Rule 12(e) of the Federal Rules of Civil Procedure, the Court has broad discretion to order Plaintiff to provide a more definite statement where the complaint is "so vague or ambiguous" that a defendant "cannot reasonably be required to frame a responsive pleading." Fed. R. Civ. P. 12(e); *see also Warth v. Seldin*, 422 U.S. 490, 501-502 (1975) (courts can require amendment of the complaint to provide additional detail). An order for a more definite statement serves the Court's and the parties' interests because, "[u]nless cases are pled clearly and precisely, issues are not joined, discovery is not controlled, the trial court's docket becomes unmanageable, the litigants suffer, and society loses confidence in the court's ability to administer justice." *Anderson v. Dist. Bd. of Trs. of Cent. Fla. Cmty. Coll.*, 77 F.3d 364, 367 (11th Cir. 1996); *see also Thomas v. Independence Township*, 463 F.3d 285, 301 (3d Cir. 2006).

Rule 12(e) complements Rule 8, which requires a "short and plain statement of the claim showing that the pleader is entitled to relief." Fed. R. Civ. P. 8(a)(2). Together these rules permit the court and the litigants to know, at the pleading stage, who is being sued and the basis for the allegations. This facilitates the just, speedy, and inexpensive determination of the action. *McHenry v. Renne*, 84 F.3d 1172, 1179-80 (9th Cir. 1996); Fed. R. Civ. P. 1. Courts have properly held plaintiffs to their burden of providing a clear and accurate complaint and have required amendment when, as here, the complaint fails to provide necessary information such as an identification of the accused products:

> Defendant cannot realistically be expected to frame a responsive pleading without risk of prejudice in the absence of any indication as to which of its products are accused. Plaintiff cannot foist the burden of discerning what products it believes infringe the patent onto defense counsel regardless of their skill and expertise.

eSoft, Inc. v. Astaro Corp., 2006 WL 2164454 at *2 (D. Colo. July 31, 2006).

Power Integrations cannot meet its burden through unsupported allegations of infringement of unspecified claims by unidentified products. As the Supreme Court held, "factual allegations must be enough to raise a right to relief above the speculative level." *Bell*

Atlantic, 127 S. Ct. at 1965. "[A] plaintiff's obligation to provide the 'grounds' of his 'entitlement to relief' requires more than labels and conclusions, and a formulaic recitation of the elements of a cause of action will not do." *Id.* at 1964-65.

IV. ARGUMENT

In its complaint, Power Integrations alleges infringement of three patents – the '851, '876 and '270 patents. Power Integrations' complaint, however, omits key information about its allegations. Specifically, Power Integrations fails to identify (i) the accused products, (ii) the asserted claims, (iii) the allegedly infringing acts supposedly performed by each of the three defendants, or (iv) the basis that this infringement was willful. Instead, Power Integrations simply repeats the legal definition of infringement:

> Defendants have been and are now infringing, inducing infringement, and contributing to the infringement of the [patent-in-suit] in this District and elsewhere by making, using, selling, offering to sell, and/or importing devices, including PWM integrated circuit devices, covered by one or more claims of the [patent-in-suit], and/or contributing to or inducing the same by third-parties, all to the injury of Power Integrations.

Complaint at 3-5.

The Supreme Court has rejected Power Integrations' approach to pleading a complaint and held that "factual allegations must be enough to raise a right to relief above the speculative level". *Bell Atlantic*, 127 S.Ct. at 1965. Specifically, the Supreme Court concluded that "a plaintiff's obligation to provide the 'grounds' of his 'entitle[ment] to relief' requires more than labels and conclusions, and a formulaic recitation of a cause of action will not do". *Id.*, at 1964-1965. Thus, merely pleading the elements of the patent infringement statute, as Power Integrations has done, is insufficient. *See Agilent Techs., Inc. v. Micromuse, Inc.*, 2004 WL 2346152 at *5-6 (S.D.N.Y. Oct. 19, 2004) (granting motion for more definite statement where complaint merely stated that defendant "makes, sells, or offers products for sale... that infringe Agilent's patents").

Since, without an identification of the accused products, asserted claims, allegedly infringing acts, and basis of the allegation of willfulness, Defendants "cannot reasonably prepare a response", they are entitled to a more definite statement. Fed. R. Civ. Proc. 12(e).

A. Power Integrations' Complaint Does Not Identify The Accused Products.

Power Integrations' complaint fails to identify a single specific product of any of the three Defendants that is actually accused of infringement. *See* Complaint. Instead, Power Integrations broadly claims that Defendants' "devices" infringe the '851 and '876 patents. *Id.* at ¶¶ 13 and 19. Power Integrations' allegations of infringement of the '270 patent are even more tenuous – Power Integrations claims "upon information and belief" that some unnamed "devices" infringe. *Id.* at ¶ 25.

Defendants sell literally thousands of different products, most of which are entirely unrelated to the patents-in-suit. Because, however, Power Integrations purports to accuse all of Defendants' "devices", Power Integrations would apparently require Defendants to analyze every single device before they can respond to the complaint:

> [B]y failing to identify any allegedly infringing product or to set forth a limiting parameter, plaintiff in effect is requiring defendant to compare its approximately 40 products to at least 20 claims of the '433 patent in order to formulate a response.... Defendant should not have to guess which of its products infringe nor guess how its products might fall within plaintiff's interpretation of the claims of the patent.

Bay Indus, 2006 WL 3469599 at *2. Since Defendants "cannot reasonably prepare a response", the Court should order Power Integrations to provide a more definite statement and identify the accused products. Fed. R. Civ. P. 12(e).

When, as here, a "complaint fails to identify any particular product or service that allegedly infringes the patent-in-suit", it is appropriate to order a more definite statement. *See eSoft, Inc. v. Astaro Corp.*, 2006 WL 2164454 at *2 (D. Colo. July 31, 2006); *Pharmaceutical Solutions, Inc. v. Vitamax RX*, 2006 WL 14559 at *3 (D. Minn. Jan. 3, 2006) (granting motion for more definite statement where complaint failed to "identify which product or products allegedly manufactured or sold... is alleged to infringe PSI's patents").

Indeed, courts have ordered more definite statements in cases where plaintiffs have provided considerably more information than found in Power Integrations' complaint. For instance, in *Static Control Components, Inc. v. Future Graphics, LLC*, 2008 WL 160827 at *1 (M.D.N.C. Jan. 15, 2008), the court granted a motion for more definite statement when the

complaint merely included a non-exclusive list of part numbers. "While the Complaint in this case identifies some chips by item number and attempts to use the term 'universal chips' as a limiting parameter, the allegation… is simply insufficient to allow [defendant] to formulate a response to the Complaint." *Id.* at *4. Under such circumstances, the defendant could not limit its responsive pleading to the 12 chips non-exclusively identified. *Id.* "Therefore, in order to frame a responsive pleading, [defendant] has no choice but to interpret each of the claims of the patents in suit, compare each of its chips that could be considered 'universal chips' to the claims in the patents in suit, and determine whether it believes the chips violate any of the claims in the patents in suit." *Id.* at *4-5. The court concluded that "[a]bsent a more definite statement regarding the specific chips that [plaintiff] asserts are allegedly infringing, [defendant] cannot 'reasonably be required to frame a responsive pleading.'" *Id.* at *5.

Similarly, in this district then-Chief Judge Robinson found that a party's simple averment of infringement of "products, including the 8692 product" failed to satisfy Federal Rule of Civil Procedure 8(a). *See Ondeo Nalco Co. v. EKA Chem., Inc.*, 2002 WL 1458853 at *1 (D. Del. June 10, 2002). The court held that "[w]ith the exception of the description of the 8692 product, the pleadings are too vague to provide plaintiff with fair notice of which products are accused of infringing defendant's patents." *Id.*

Here, a more definite statement identifying the accused products is particularly appropriate since Power Integrations has already identified such products to Defendants' customers. *See* Ex. 10. Given that Power Integrations already has limited its infringement allegations to products with particular features in correspondence with Defendants, it is especially inappropriate for Power Integrations to attempt to require Defendants to respond to a complaint that alleges infringement of "devices" that Power Integrations knows are not at issue. *See* Ex. 9. Defendants "should not have to guess which of [their] products infringe nor guess how [their] products might fall within plaintiff's interpretation of the claims of the patent." *Bay Indus*, 2006 WL 3469599 at *2.

B. Power Integrations' Complaint Does Not Identify The Asserted Claims.

The patents-in-suit have 75 different claims. Complaint, Exs. A-C. For Power Integrations to have a good faith basis to file suit, Power Integrations must know which claim or claims it believes to be infringed.[2] Fed. R. Civ. P. 11. Indeed, given Power Integrations' list of 21 specific products that allegedly infringe, Power Integrations must have completed its analysis. Power Integrations' complaint, however, fails to identify a single asserted claim. Instead, Power Integrations conceals its allegations by stating that Defendants' "devices" are "covered by one or more claims" of the patents-in-suit. Complaint at ¶¶ 13, 19, and 25.

In the past, the "general practice" has been to require a complaint to identify the asserted claims. *See J.D. Ferry v. Macbeth Eng'g Group*, 11 F.R.D. 75, 76 (M.D. Pa. 1951); *Coyne & Delany Co. v. G.W. Onthank*, 10 F.R.D. 435, 436 (S.D. Iowa 1950); *Marvel Slide Fastener Corp. v. Klozo Fastener Corp.*, 80 F.Supp. 366 (D.C.N.Y. 1948). More recently, courts have not necessarily required that a complaint identify the asserted claims to satisfy the notice pleading standard set forth in Federal Rule of Civil Procedure 8. *See, e.g., R2 Tech., Inc. v. Intelligent Sys. Software, Inc.*, 2002 WL 31260049 at *3 (D. Del. Oct 9, 2002). In light of the Supreme Court's recent decision, however, the "general practice" of requiring an identification of the asserted claims appears proper. *See Bell Atlantic*, 127 S.Ct. at 1965-66. Moreover, whether a complaint satisfies Rule 8 is not dispositive of whether it also satisfies the requirements of Rule 12(e). A complaint must satisfy both Rules. "Together these rules permit the court and the litigants to know, at the pleading stage, who is being sued and the grounds for same, thereby facilitating the just, speedy, and inexpensive determination of the action." *Bay Indus.*, 2006 WL 3469599 at *1.

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[2] Under Rule 11, Power integrations was obligated "[b]efore filing [ ] claims of patent infringement... to, at a bare minimum, apply the claims of each and every patent that is being brought into the lawsuit to an accused device and conclude that there is a reasonable basis of a finding of infringement of at least one claim of each patent so asserted." *View Engineering Inc. v. Robotics Visions Systems, Inc.*, 208 F.3d 981, 986 (Fed. Cir. 2000). "In bringing a claim of infringement, the patent holder, if challenged, must be prepared to demonstrate to both the court and the alleged infringer exactly why it believed before filing a claim that it had a reasonable chance of proving infringement." *Id.*

Here, it is particularly important that Power Integrations identify the asserted claims. Power Integrations has this information and it is no excuse that Power Integrations intends to provide it "during discovery". *See* Ex. 9. A plaintiff cannot "make up" for inadequate pleading through discovery that does, eventually, provide a defendant the functional equivalent of the required "short and plain statement of the claim." *Eisenach v. Miller-Dwan Med. Ctr.*, 162 F.R.D. 346, 348-49 (D. Minn. 1995).

The '851 and '876 patents are currently being reexamined by the Patent Office and the "representative" claims that Power Integrations identified in its letter stand rejected. Exs. 5 and 6. Thus, it is important to determine at the outset of this case whether Power Integrations is merely asserting these same claims since, if so, the Court should stay this action pending conclusion of the reexamination.

Given Power Integrations' previous decision to assert only select claims in the earlier litigation – and its later dropping of many of those claims prior to trial – Power Integrations cannot intend to assert all 75 claims from the patents-in-suit. It is unreasonable for Power Integrations to require that Defendants analyze claims for purposes of both infringement and invalidity that Power Integrations has no basis or intention to assert. Thus, the Court should order Power Integrations to identify the asserted claims. Fed. R. Civ. P. 12(e).

C. Power Integrations' Complaint Does Not Identify The Alleged Infringement.

There are three separate defendants in this action and Power Integrations' complaint fails to identify which defendant Power Integrations is accusing of infringing which patent. *See* Complaint. For instance, is Power Integrations accusing Fairchild, once again, of infringing the '851 and '876 patents and accusing System General of infringing the newly asserted '270 patent? Or, is Power Integrations now accusing System General of infringing the '851 and '876 patents and accusing Fairchild of infringing the '270 patent? Perhaps, Power Integrations has something else in mind entirely. Without identifying the alleged infringement by each defendant, Defendants cannot reasonably respond to the complaint.

Moreover, while its complaint alludes to allegedly infringing "third-parties", Power Integrations' complaint fails to identify them, how these unnamed "third-parties" supposedly infringe, which of the three named defendants allegedly "contribut[ed] to or induc[ed]" such third party infringement, or how the Defendants' conduct supposedly led to such third-party infringement. *See* Complaint at ¶¶ 13, 19, and 25. Indeed, Power Integrations fails even to allege that the Defendants were aware of the asserted patents – a requirement for there to be any indirect infringement.[3] *See Aro Mfg. Co., Inc. et al. v. Convertible Top Replacement Co., Inc.*, 377 U.S. 476, 488 (1964); Water Techs. Corp. v. Calco, Ltd., 850 F.2d 660, 668 (Fed. Cir. 1988); 35 U.S.C. §§271(b), (c). Since there is no claim of the requisite knowledge, the Court should strike the allegations of indirect infringement. "[W]hen the allegations in a complaint, however true, could not raise a claim of entitlement to relief, 'this basic deficiency should... be exposed at the point of minimum expenditure of time and money by the parties and the court.'" *Bell Atlantic,* 127 S.Ct. at 1966; Fed. R. Civ. P. 12(f).

Finally, Power Integrations fails to identify the allegedly infringing activity by each Defendant. Instead, Power Integrations simply quotes the Patent Act and alleges that Defendants have infringed "by making, using, selling, offering to sell, and/or importing" unspecified devices. This is a significant issue since, as Power Integrations knows from the previous litigation, the vast majority of Defendants' manufacture and sales activities occur ***outside*** the United States, and, thus, are not subject to Power Integrations' U.S. patents. *See Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007). If Power Integrations has a basis to allege that Defendants have actually made, used, sold, or imported the particular devices alleged to infringe within the United States, Power Integrations is obligated to set forth such facts and cannot meet this burden by parroting the law. "A plaintiff's obligation to provide the 'grounds' of his 'entitle[ment] to relief' requires more than labels and conclusions, and a formulaic recitation of a cause of action will not do...." *Bell Atlantic*, 127 S.Ct. at 1964-65.

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[3] Fairchild does not dispute that it was aware of '851 and '876 patents because of the earlier litigation, but Power Integrations has failed to allege that System General was aware of these patents or that any of the Defendants were aware of the '270 patent.

Power Integrations should be ordered to identify each Defendant's allegedly infringing acts so that Defendants can reasonably respond to the complaint. Fed. R. Civ. P. 12(e).

D. Power Integrations' Complaint Does Not Identify The Basis For Its Allegation Of Willful Infringement.

Power Integrations has accused Defendants of willfully infringing the '851 and '876 patents.[4] Power Integrations provides absolutely no basis for this allegation. Instead, Power Integrations' complaint simply states that "Defendants' acts of infringement have been, and continue to be, willful so as to warrant the enhancement of damages awarded as a result of their infringement." Complaint at ¶¶ 15 and 21. By making only a bare averment of willful infringement, Power Integrations' Complaint fails even to meet the liberal notice pleading standard, which requires pleading sufficient factual grounds to show that the pleader is entitled to relief. *Bell Atlantic,* 127 S.Ct. at 1965-66; Fed. R. Civ. P. 8.

In *In re Seagate Technology, LLC*, the Federal Circuit – in an *en banc* decision – clarified that willful infringement requires that "the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent." *In re Seagate*, 497 F.3d 1360, 1371 (Fed. Cir. 2007). "In the area of patent infringement, a showing of objective reasonableness (which negates the existence of recklessness) does not require that the would-be infringer know conclusively, i.e. – with one hundred percent certainty, that his actions are legitimate. Instead, the infringer need only show there was a reasonable basis for him to believe his actions were legitimate." *Abbott Labs. v. Sandoz, Inc.*, 532 F.Supp.2d 996, 999 (N.D. Ill., 2007).

As the Federal Circuit has held after *Seagate*, "both legitimate defenses to infringement claims and credible invalidity arguments demonstrate the lack of an objectively high likelihood that a party took actions constituting infringement of a valid patent." *Black & Decker, Inc. v. Bosch Tool Corp.*, 260 Fed.Appx. 284, 2008 WL 60501 at *7 (Fed. Cir. 2008). As set forth above, the Patent Office is currently reexamining the '851 and '876 patents and the claims that Power Integrations has previously asserted are all presently rejected in light of prior art that

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[4] Power Integrations has not alleged willful infringement of the '270 patent. *See* Complaint.

Power Integrations failed to disclose to the Patent Office during the prosecution of those patents. *See* Ex. 5 and 6. The existence of a Patent Office preliminary order determining that the asserted claims were unpatentable as obvious is sufficient to preclude finding the objective recklessness necessary for proving willfulness under the *Seagate* standard. *Pivonka v. Central Garden & Pet Co.*, 2008 WL 486049 (D. Colo. 2008).

"[W]hen the allegations in a complaint, however true, could not raise a claim of entitlement to relief, "'this basic deficiency should... be exposed at the point of minimum expenditure of time and money by the parties and the court.'" *Bell Atlantic,* 127 S.Ct. at 1966. Thus, the Court should dismiss Power Integrations' allegations of willful infringement pursuant to Federal Rule of Civil Procedure 12(b)(6). At a minimum, however, the Court should order Power Integrations to provide a more definite statement identifying the basis of its allegations.

E. There Is No Burden Or Prejudice For Power Integrations To Provide Information Already In Its Possession.

Pursuant to Federal Rule of Civil Procedure 12(e), a more definite statement is required if the complaint is "so vague or ambiguous that the party cannot reasonably prepare a response." Power Integrations' complaint fails this test. Defendants "cannot realistically be expected to frame a responsive pleading without risk of prejudice in the absence of any indication as to which of [their] products are accused. Plaintiff cannot foist the burden of discerning what products it believes infringe the patent onto defense counsel regardless of their skill and expertise." *eSoft* at *4; *accord Williams Advanced Materials, Inc. v. Target Tech. Co., LLC*, 2007 WL 1133211 at *2 (W.D.N.Y. Apr. 16, 2007), *rev'd on other grounds*, 2007 WL 2245886 (W.D.N.Y. Aug. 1, 2007).

Power Integrations may argue that a more definite statement is unnecessary because of the parties' earlier litigation. In fact, it is precisely because of this litigation that a more definite statement is appropriate. Defendants need to understand how this case differs from the one that has already been completed.

Most importantly, because of the earlier litigation and their pre-filing investigation, Power Integrations is necessarily in possession of the information Defendants require – Power Integrations simply refuses to provide it in order to secure a tactical advantage. For instance, Power Integrations has identified 21 products by part number in an effort to secure new business from Defendants' customers but refuses to provide this information to the Court or to Defendants. Similarly, Power Integrations must know whether it is asserting the claims that are presently rejected in the pending reexamination or different claims. Presumably, Power Integrations has in mind specific acts that it believes infringe these claims. Given the ease with which Power Integrations could provide this information, it is not reasonable to require Defendants to respond to the complaint without it. "Assuming plaintiff has properly investigated his claim before filing suit, there is no reason not to inform the defendant precisely which products are at issue." *Bay Indus.* , 2006 WL 3469599 at *2.

V. CONCLUSION

For the reasons set forth above, Defendants respectfully request the Court to grant this motion and order plaintiff Power Integrations to amend its Complaint to make a more definite statement, including a specific identification of each accused product, asserted claim, allegedly infringing act, and why that infringement is considered to be "willful".

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Dated: July 11, 2008

EXHIBIT 1

REQUEST FOR *EX PARTE* REEXAMINATION OF U.S. PATENT NO. 6,107, 851

Attachment to Form PTO-1465
Providing Information about
Pat. No. 6,107,851
November 9, 2006
Express Mail No. [EV 859762260 US]

I. INTRODUCTION

Fairchild Semiconductor, Inc. ("Fairchild" or "Requester"), through these papers, requests that the Patent and Trademark Office grant this *ex parte* request to reexamine Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 of U.S. Patent No. 6,107, 851 ("the '851 patent") pursuant to the provisions of 35 U.S.C. §§ 302 *et seq.* and 37 C.F.R. § 1.510. A complete copy of the patent is enclosed as **Exhibit A**. A copy of the prosecution history of the '851 patent is attached as **Exhibit B**.

The inventors of the '851 patent are Balu Balakrishnan, Alex Djenguerian, and Leif Lund. Issuing on August 22, 2000, the '851 patent claims the benefit of a priority date of May 18, 1998.

Power Integrations sued Fairchild on October 20, 2004 for infringement of the '851 patent in the United States District Court for the District of Delaware (Civil Action No. 04-1371-JJF) ("the Litigation"). A claim construction order was entered on March 31, 2006. Three phrases relating to the scope of the '851 patent were construed by the Court. They are "soft start circuit," "frequency variation circuit," and "frequency variation signal."

Power Integrations asserted Claims 1, 2, 4, 7, 9, 10, 11, and 13 during the Litigation. The Court limited the number of claims for trial and Power Integrations selected Claims 1 and 4. The Litigation was bifurcated into an infringement / damages phase and an invalidity phase. The infringement / damages trial took place from October 2-6, 2006. The jury found that certain Fairchild products infringed Claims 1 and 4 of the '851 patent. The invalidity trial is scheduled to begin on December 4, 2006. A final judgment has not been entered in the case, and thus it is not yet ripe for appeal.

The undersigned is counsel of record in that case and represents that he is authorized to act in a representative capacity for Fairchild. Requester provides the fee for reexamination herewith in the amount of $2,520.00 and the fee for submitting an Information Disclosure Statement of $180.00.

A complete and entire copy of this Request for *ex parte* Reexamination and all supporting documents have been provided to the patent owner, Power Integrations, by serving Power Integrations' counsel of record in the Litigation at 225 Franklin Street, Boston, MA 02110-2804. An additional copy was served on BLAKELEY, SOKOLOFF, TAYLOR, ZAFMAN LLP., attorney of record for the '876 patent, at 12400 Wilshire Boulevard, Seventh Floor, Los Angeles, CA 90025.

II. SUBSTANTIAL NEW QUESTION OF PATENTABILITY PURSUANT TO 37 CFR § 1.510(B)(1)

Fairchild submits that a substantial question of patentability exists because the following patents and printed publications anticipate or render obvious, either alone or in combination with each other or with the prior art of record, Claims 1, 2, 4, 7, 9, 10, 11, 13, 16 and 17 of the '851 patent.

1. SGS-Thomson TEA 2262 Datasheet (April 1996) and related Application Note 376 (June 1994) (collectively, "TEA2262"). Attached to PTO Form 1449 as **Refs. CA and CB**, respectively.

2. Power Integrations SMP211 Datasheet (January 1996) ("SMP 211"). Attached to PTO Form 1449 as **Ref. CC**.

3. U.S. Patent No. 4,638,417 ("Martin"). Attached to PTO Form 1449 as **Ref. AA**.

4. "Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters," IEEE Transactions on Power Electronics, Vol. 8, No. 4 (October 1993) by A.C. Wang and S.R. Sanders ("Wang and Sanders"). Attached to PTO Form 1449 as **Ref. CD**.

5. U.S. Patent No. 5,498,995 to Szepesi et al., (March 1996) and related (National Semiconductor LM 3101 datasheets, entitled "LM 3101 Secondary-Side PWM Controller" 1995) ("Szepesi") Attached to PTO Form 1449 as **Refs. AB and CE**, respectively.

6. "Off-Line Power Integrated Circuit for International Rated 60-watt Power Supplies" by Richard Keller, Applied Power Electronics Conference and Exposition, February 1992 (pp. 505-512) ("Keller"). Attached to PTO Form 1449 as **Ref. CF**.

A. PROPOSED REJECTIONS

Claims 1, 2, 4, 7, 9, 10, 11, 13, 16 and 17 are rejected under 35 U.S.C. §§102(a)(b) as anticipated by TEA2262.

Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 are rejected under 35 U.S.C. §§102(a)(b) as

anticipated by SMP211 in light of the admitted prior art of the patent.

Claims 1, 2, 7, 9, 10, 11, 16, and 17 are rejected under 35 U.S.C. §§102(a)(b) as anticipated by Martin or under 35 U.S.C. §103(a) as being unpatentable over Martin in view of SMP211. Claims 4 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Martin in view of Keller.

Claims 1, 2, 7, 9, 10, 11, 16, and 17 are rejected under 35 U.S.C. §§102(a)(b) as anticipated by Wang and Sanders. Claims 4 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wang and Sanders in view of Keller.

Claims 1, 2, 7, 9, 10, 11, 16, and 17 are rejected under 35 U.S.C. §§102(a)(b) as anticipated by Szepesi.

B. THE TEA2262 DATASHEET RAISES A SUBSTANTIAL NEW QUESTION OF PATENTABILITY WITH RESPECT TO CLAIMS 1, 2, 4, 7, 9, 10, 11, 13, 16, AND 17

The TEA 2262 datasheet describe a pulse width modulated switch (manufactured by SGS Thomson Microelectronics) that includes a frequency variation circuit providing a frequency variation signal, and an oscillator that provides an oscillation signal that varies within a frequency range according to the frequency variation signal, as recited in Claim 1. The same signal input is used to provide soft start, as recited in Claim 4. These teachings were not present during the prior examination of the '851 patent. Requester believes that a reasonable examiner would consider these teachings important in determining whether or not the claims are patentable.

Further, one of ordinary skill in the art, in electronically searching for the TEA 2262 datasheet, would be referred to a "Related Application Note" titled "TEA 2260/TEA2261 HIGH PERFORMANCE DRIVER CIRCUITS FOR S.M.P.S."[1] Therefore, this Application Note ("AN 376") may be used as an additional reference to create a multi-reference anticipation rejection under 35 U.S.C. § 102. Requester respectfully submits that the TEA 2262 datasheet and AN376 anticipates or renders obvious Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17. For these reasons, the TEA 2262 datasheet and AN 376 raise a substantial new question of patentability with respect to each of these Claims of the '851 patent.

[1] Counsel for Requester visited the ST Microelectronics website on October 24, 2006, searched for TEA2262, and was referred to the Application Note described at the URL http://www.st.com/stonline/products/literature/ds/10453.htm.

C. THE SMP 211 DATASHEET RAISES A SUBSTANTIAL NEW QUESTION OF PATENTABILITY WITH RESPECT TO CLAIMS 1, 2, 4, 7, 9, 10, 11, 13, 16, AND 17

The SMP211 Datasheet (attached to PTO 1449 Form as **Ref. CC**) is a primary prior art reference that anticipates or, either alone or combined with other prior art, renders obvious Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 of the '851 patent. Figure 1 of the '851 patent references the SMP211 device. Therefore, the datasheet for the SMP211 device can be used as an additional reference, which, in combination with Figure 1, anticipates the referenced claims of the '851 patent. *See* MPEP § 2131.01. The SMP211 datasheet is dated January 1996, qualifying it as a prior art reference under 35 U.S.C. § 102(b). Figure 1 of the '851 patent is admitted to be prior art by Power Integrations.

Further, Figure 1 of the '851 Patent, which Power Integrations characterized as "Prior Art", includes as pulse width modulated (PWM) switch 90, an integrated circuit made by Power Integrations, designated "SMP211." As can be seen from Figure 3 of the SMP211 datasheet, the SMP211 includes an oscillator for generating a maximum duty cycle signal: "The D_{MAX} signal from the oscillator limits the maximum duty cycle by gating the output driver." (see SMP211 datasheet at p. 2-49) Moreover, Power Integrations admitted that the prior art included an oscillator and a signal with a frequency range dependent on a frequency variation circuit: "The jitter current 135 is used to vary the frequency of the sawtoothed waveform generated by the oscillator contained in the pulse width modulated switch 90." Ex. A Patent 3:14-17.

As shown below, Power Integrations never corrected the Examiner when he characterized the allowable subject matter of the '851 patent and (incorrectly) stated that the prior art of record did not appear to disclose this feature. Accordingly, Figure 1 of the '851 patent may be considered a prior art reference not previously considered by the Examiner. Likewise, the SMP211 datasheet was never cited or considered during the prosecution of the '851 patent. Thus, Figure 1 and the SMP211 datasheet raise a substantial question of patentability.

D. PROSECUTION HISTORY OF THE '851 PATENT RELATING TO SMP211

The '851 patent describes power supply circuits that convert AC voltage to DC voltage. Ex. A., 1:9-11. The power supply circuits include a switch to regulate power, voltage or current that is provided

to an electronic device. Ex. A, 1:12-15. One particular type of switch operation used with power supply circuits is a pulse width modulator ("PWM") switch. Ex. A, 1:14-17.

The use of PWM switches having an oscillator to regulate the output of a power supply was known well before the May 18, 1998 priority date, as stated in the background section of the specification for the '851 patent:

> Switches that operate according a pulse width modulated control to maintain the output voltage, current, or power of the power supply within a regulated range are also known. These switches utilize an oscillator and related circuitry to vary the switching frequency of operation of the switch, and therefore regulated the power, current or voltage that is supplied by the power supply.

Ex. A, 1:14-21.

After Power Integrations responded to the Examiner's restriction requirement by making an election of species for the '851 patent (to claims directed to a PWM circuit with a frequency variation circuit), the Examiner rejected pending Claims 29, 35 and 37 under 35 U.S.C. § 102(b) as anticipated by Applicants' Prior Art Figure 1. The Examiner also rejected pending Claim 34 under 35 U.S.C. § 103(a) over Applicants' Prior Art Figure 1.

As to the remaining claims, the Examiner stated that the allowable subject matter included "a PWM switch comprising an oscillator for generating a maximum duty cycle signal and a singnal [sic] with a frequency range dependent on a frequency variation circuit as recited in claim 1." Ex. B, 12/13/99 Office Action, p. 5.

In response to the Examiner's § 102(b) rejection of Claims 29, 35, and 37, Power Integrations amended independent Claim 29 and argued:

> Claim 29 as presently amended now expressly recites a regulation circuit that includes an oscillator that provides a maximum duty cycle signal and an oscillation signal having frequency range that is varied according to a frequency variation signal. The Applicants' Prior Art Figure 1 fails to disclose, teach or suggest such limitations.

Ex. B, 3/20/00 Amendment and Response, p. 6. (emphasis added)

Power Integrations also argued that Claim 34, by virtue of its dependency on Claim 29, distinguished over the prior art for at least this same reason. Ex. B, 3/20/00 Amend. and Response, p. 7.

The Examiner then issued a notice of allowance as to claims 1-10 and 29-36; no further

statement of reasons for allowance was offered. Ex. B., 4/10/00 Notice of Allowability.

Power Integration's statement to the Examiner that its Prior Art Figure 1 did not disclose an oscillator as described was incorrect and it should be considered as a new prior art reference. Figure 1 of the '851 patent includes a pulse width modulated switch 90 designated "SMP211". This is a reference to the applicant's own SMP211 device, which does include an oscillator providing a maximum duty cycle signal. Moreover, the disclosed prior art included an oscillator with a signal with a frequency range dependent on a frequency variation circuit. *See supra* at 4. Applicants also failed to submit a datasheet for the SMP211 device which would have shown the existence of an oscillator with a maximum duty cycle signal on the SMP211 device. For these reasons, the SMP211 datasheets raise a material issue of patentability as a publication not considered before by the Examiner. Further, it raises a question regarding the status of Figure 1 of the '366 patent. Although Figure 1 was previously before the Examiner, the Examiner considered it under the presumption that the SMP211 did not include an oscillator with a maximum duty cycle signal, which was an incorrect presumption based on Power Integrations' misleading statements. Therefore, Figure 1 of the '851 patent should be considered as a new prior art reference. Accordingly, the '851 patent should be reexamined.

E. THE MARTIN PATENT RAISES A SUBSTANTIAL NEW QUESTION OF PATENTABILITY WITH RESPECT TO CLAIMS 1, 2, 7, 9, 10, 11, 16, AND 17

The Martin patent issued on January 20, 1987 and has a filing date of August 16, 1985. Martin is prior art to the '851 patent under 35 U.S.C. § 102(a), § 102(b), and § 102(e). Like the TEA 2262 datasheet, Martin also discloses a pulse width modulated switch that includes a frequency variation circuit providing a frequency variation signal, and an oscillator that provides an oscillation signal that varies within a frequency range according to the frequency variation signal, as recited in claim 1. This teaching was not present during the prior examination of the '851 patent. Requester believes that a reasonable examiner would consider this teaching important in determining whether or not the claims are patentable. Requester respectfully submits that the Martin Patent, anticipates or renders obvious either alone or in combination with the SMP211 device Claims 1, 2, 7, 9, 10, 11, 16, and 17. Further, Requester respectfully submits that the Martin Patent, in combination with the Keller article, renders

Claims 4 and 13 obvious. For these reasons, Martin raises a substantial new question of patentability.

F. WANG AND SANDERS RAISES A SUBSTANTIAL NEW QUESTION OF PATENTABILITY WITH RESPECT TO CLAIMS 1, 2, 7, 9, 10, 11, 16, AND 17

The article by Wang and Sanders was published in October of 1993 in the IEEE Transactions on Power Electronics Journal, and so is a prior art reference under § 102(a) and § 102(b). This article describes the use of frequency variation via a digitally controlled analog waveform for EMI reduction in DC-DC power converters. As with the Martin patent, Wang and Sanders discloses a counter, a ROM, and a digital to analog (D/A) converter, which together act as a frequency variation circuit which provides an (analog) frequency variation signal applied to an oscillator. Requester believes that a reasonable examiner would consider this teaching important in determining whether or not the claims are patentable. Requester respectfully submits that Wang and Sanders anticipates or renders obvious, either alone or in combination with the SMP 211 device, Claims 1, 2, 7, 9, 10, 11, 16, and 17 of the '851 patent. Further, Requester respectfully submits that the Wang and Sanders article, in combination with the Keller article, (which discloses a soft-start circuit), renders Claims 4 and 13 obvious. For these reasons, Wang and Sanders raises a substantial new question of patentability.

G. THE SZEPESI PATENT RAISES A SUBSTANTIAL NEW QUESTION OF PATENTABILITY WITH RESPECT TO CLAIMS 1, 2, 7, 9, 10, 11, 16, AND 17

The '995 patent issued on March 12, 1996, and was filed in December of 1994, making it a prior art reference to the '851 patent (which claims a priority date of May 18, 1998) under 35 U.S.C. § 102(b), (a) and (e). This patent describes operational aspects of the National Semiconductor LM3001/3101 switchmode converter IC pair. The National Semiconductor LM3101 Datasheet is found in the National Semiconductor 1995 Power ICs Databook, and so is also a prior art reference under § 102(b). It describes in greater detail the operation of the LM3001/3101 switchmode converter IC chipset.

Figure 2 of the '995 patent (assigned to National Semiconductor Corporation) references the LM3101 secondary controller. *See* **Ref. AB**. Therefore, the datasheet (entitled "LM3101 Secondary-Side PWM Controller") can be used as an additional reference which, in combination with the '995 patent, anticipates Claims 1, 2, 7, 9, 10, 11, 16 and 17 of the '851 patent. *See* MPEP § 2131.

The '995 patent to Szepesi et al. and the related LM 3101 datasheet constitute prior art under § 102(a) and § 102(b). The '995 patent provides a reference design for a pulse width modulating switch using a secondary controller with an external MOSFET switch, similar to the PWM controller shown in Figure 1 of the '851 patent that is used in conjunction with switch 435. The controller includes a frequency shift circuit and an oscillator circuit. Requester believes that a reasonable examiner would consider this teaching important in determining whether or not the claims are patentable. Requester respectfully submits that Szepesi et al. and the related LM3101 datasheet anticipate Claims 1, 2, 7, 9, 10, 11, 16, and 17 of the '851 patent.

H. THE KELLER ARTICLE RAISES A SUBSTANTIAL NEW QUESTION OF PATENTABILITY WITH RESPECT TO CLAIMS 4 AND 13

This article by Richard A. Keller, a Power Integrations employee, was published in 1993 (making it a prior art reference under 35 U.S.C. § 102 (a) and § 102 (b)), discloses a pulse width modulated MOSFET switch with soft-start functionality. The soft-start functionality is implemented completely internally. The components used include a counter, a ROM, and a digital-to-analog (DAC) converter --the same components used by Martin and Wang and Sanders to create a frequency variation signal. The Keller article is a secondary prior art reference, which in combination with Wang and Sanders, or in combination with Martin, renders Claims 4 and 13 obvious.

The invalidating prior art is voluminous and includes Power Integration's PWM switch model SMP211, and patents and printed publications dating back to February of 1992-more than 6 years before the '851 patent's earliest priority date of May 18, 1998.

III. STATEMENT OF CLAIMS FOR WHICH REEXAMINATION IS REQUESTED

Fairchild requests that the following claims of the '851 patent be reexamined: Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17. All of these claims are anticipated under 35 U.S.C. § 102, obvious under 35 U.S.C. § 103, or both, in view of the prior art patents and publications described below.

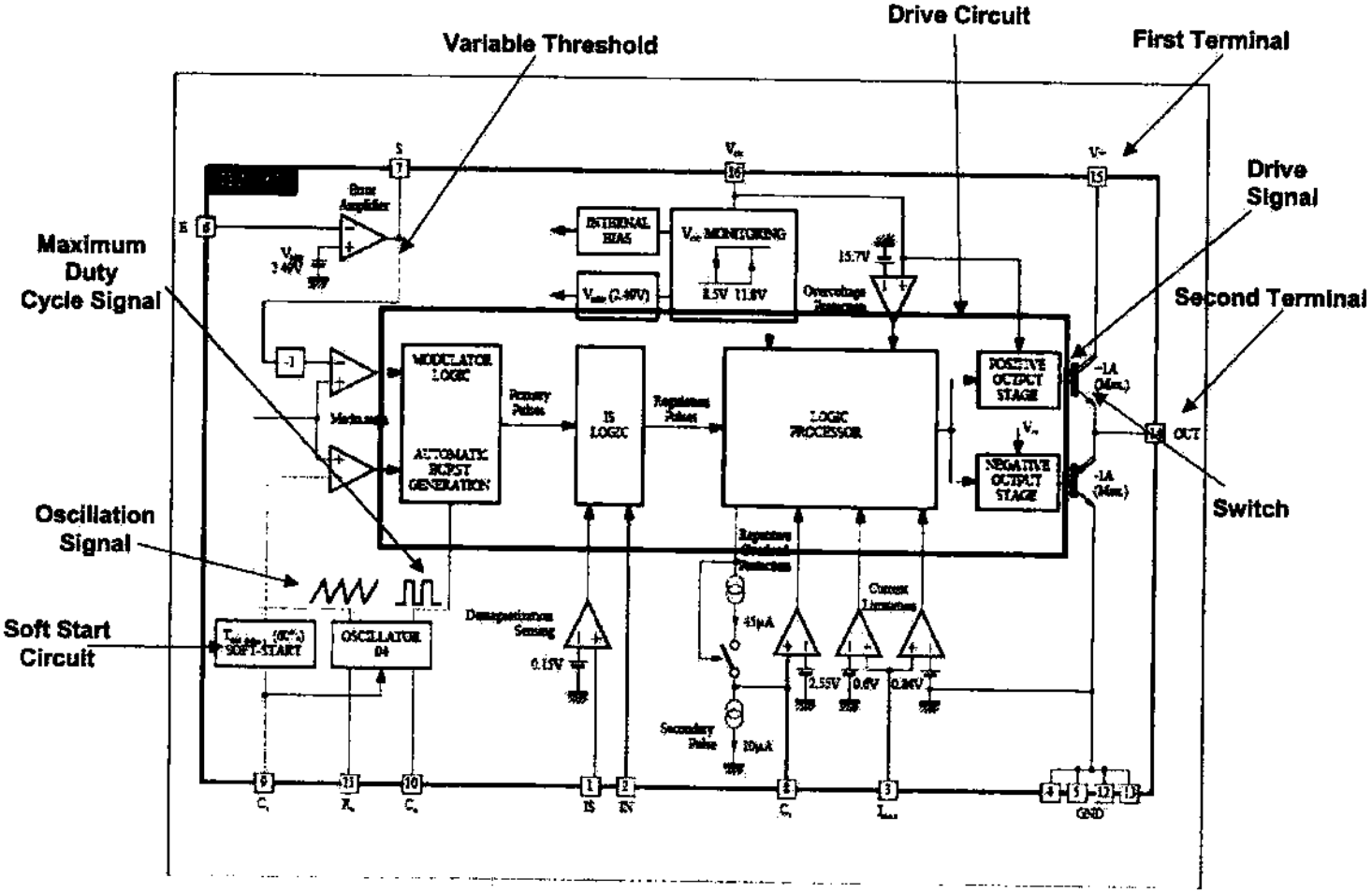
IV. EXPLANATION OF PERTINENCE AND MANNER OF APPLYING CITED PRIOR ART TO EVERY CLAIM FOR WHICH REEXAMINATION IS REQUESTED

The prior art submitted with this request invalidates claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 of

the '851 patent.

A. THE TEA2262 DATASHEET ANTICIPATES CLAIMS 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 OF THE '851 PATENT

TEA2262 describes a monolithic integrated circuit for the use in primary part of an off-line switching mode power supply. The circuit is shown on p. 2 of the TEA2262 datasheet (**Ref. CA**), reproduced here.



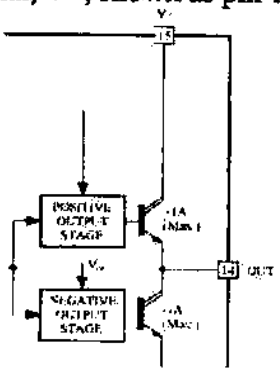
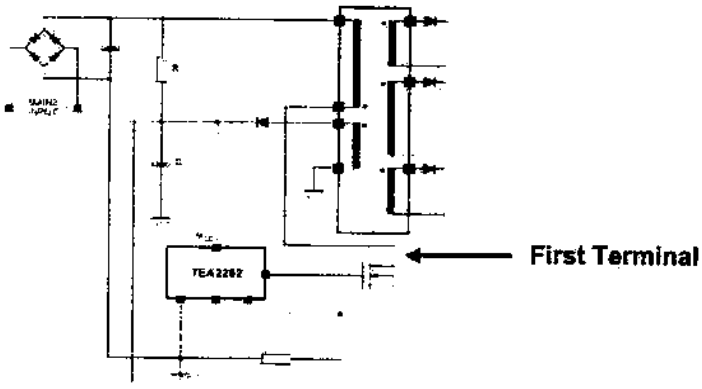
TEA2262 discloses a pulse width modulated switch having a first terminal (15), a second terminal (14), an oscillator providing a maximum duty cycle, a drive circuit that provides a drive signal, and a soft start circuit. The same input signal on pin 9 (C1) is used for both soft-start and to provide a frequency variation signal.

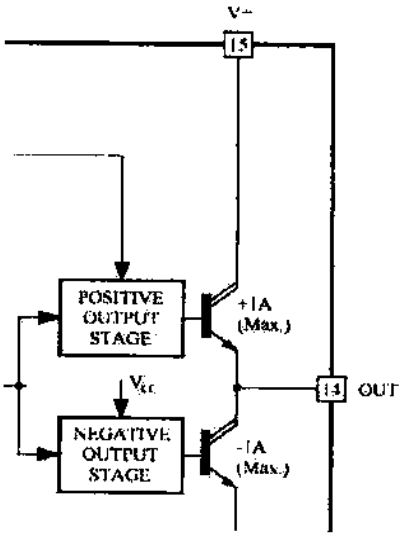
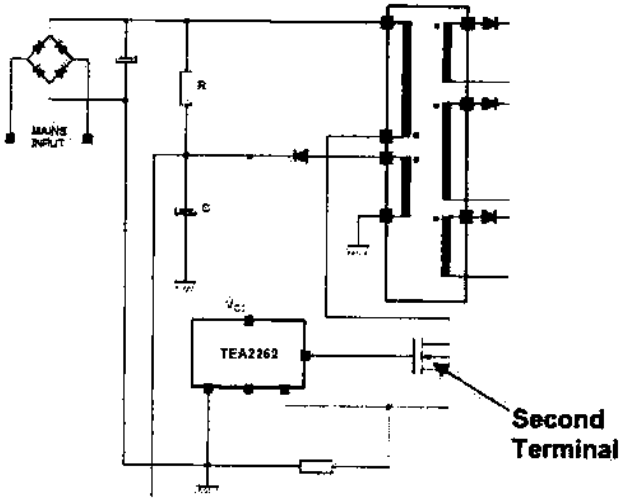
As detailed in the table below, the TEA2262 device discloses each and every limitation of

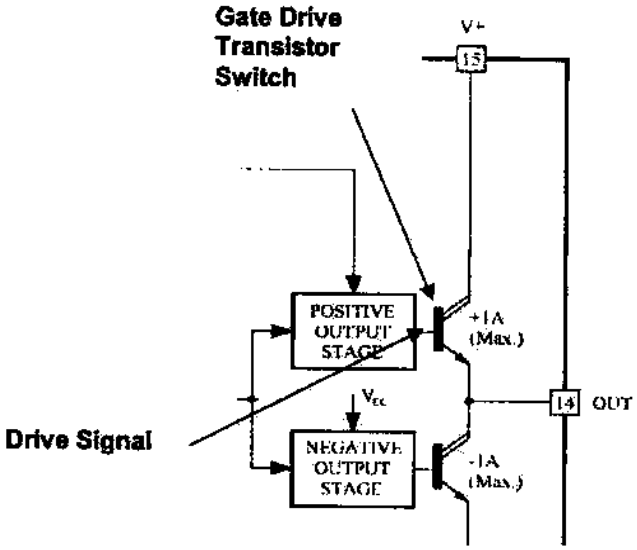
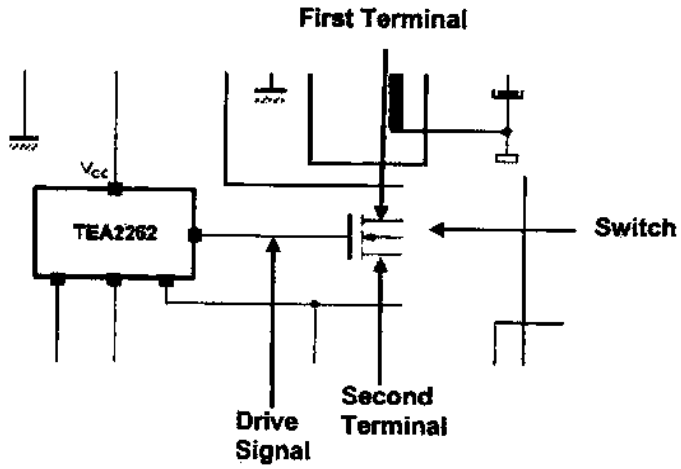
Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 of the '851 patent, anticipating these claims under 35 U.S.C. § 102 (a) and (b).

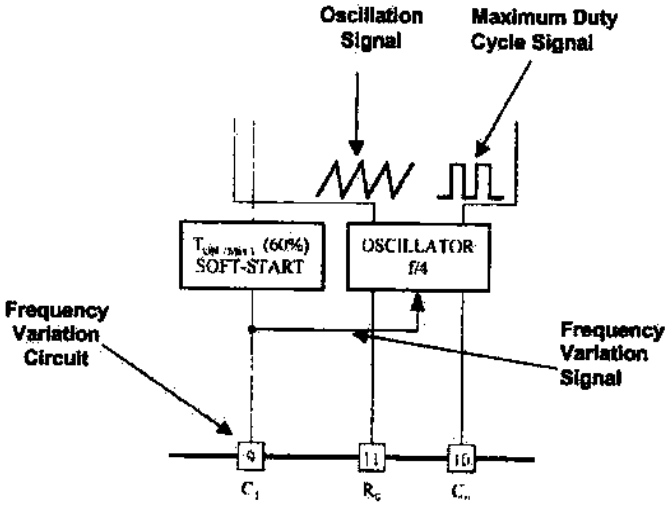
a. Claim 1

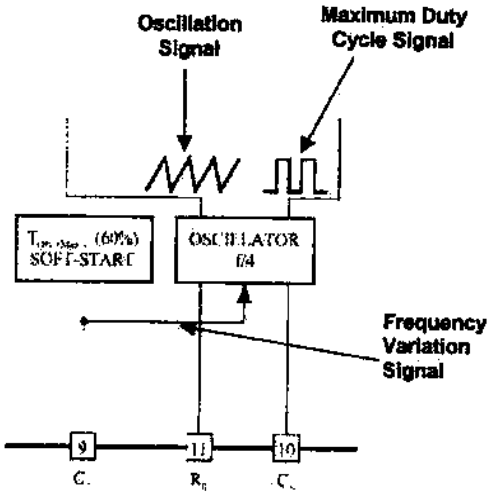
Claim 1 is an independent claim that is anticipated by the TEA2262 datasheet, a printed publication that is prior art to the '851 patent under 35 U.S.C. § 102 (a) and (b). As detailed in the table below, the TEA2262 discloses each and every limitation of Claim 1.

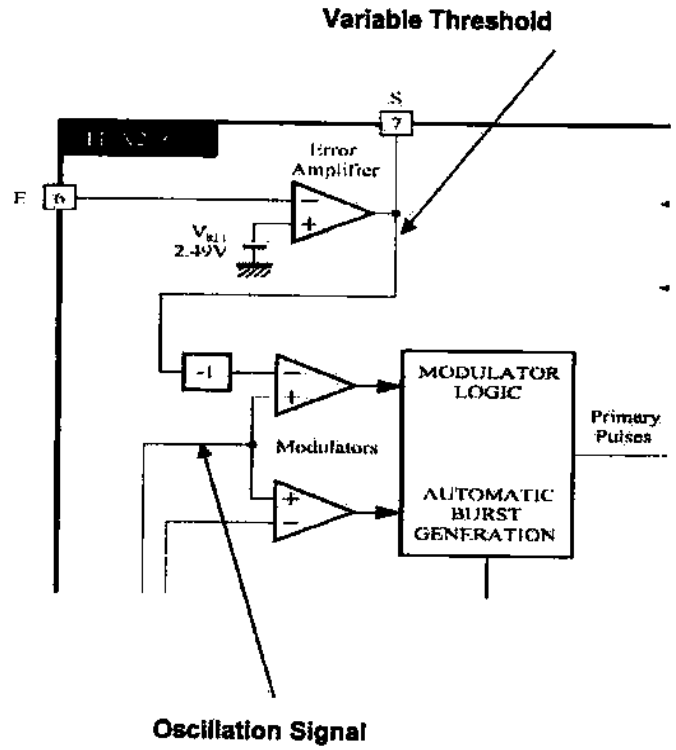
[illegible]	[illegible]
1. A pulse width modulated switch comprising:	TEA2262 datasheet p. 1: The TEA2262 is a switch mode power supply controller using a PWM generator. Two embodiments of the TEA2262 anticipate the claims of the '851 patent.
a first terminal;	In the first embodiment: TEA2262 datasheet p. 2, Block Diagram: The TEA2262 switch has a first terminal, V+, shown as pin 15.  In the second embodiment: TEA2262 datasheet p. 5, Figure 2: The first terminal is the terminal of the external transistor connected to one terminal of the primary winding of the transformer. 

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA2262
a second terminal;	In the first embodiment: TEA2262 datasheet p. 2, Block Diagram: The TEA2262 switch has a second terminal, OUT, shown as pin 14.  In the second embodiment: TEA2262 datasheet p. 5, Figure 2, The second terminal is the terminal of the external resistor connected to ground through a sense resistor. 
a switch comprising a control input, said switch allowing a signal to be transmitted between said first terminal and said second terminal according to a	In the first embodiment: TEA2262 datasheet p. 2, Block Diagram: The TEA2262 includes a switch, *i.e.*, a gate drive transistor switch, which has a control input (from a positive output stage). The gate drive

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA2262
drive signal provided at said control input;	transistor switch allows a signal to be transmitted between the first terminal, V+, and the second terminal, OUT, according to a drive signal provided at the control input from the positive output stage.  In the second embodiment: TEA2262 datasheet p. 5, Figure 2: The TEA2262 is connected to a switch comprising a control input, the switch allowing a signal to be transmitted between the first terminal and the second terminal according to a drive signal provided at said control input. 

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA2262
a frequency variation circuit that provides a frequency variation signal;	In both embodiments: TEA2262 datasheet p.2, block diagram: The soft-start circuit and capacitor on pin 9 (C1) is a frequency variation circuit that provides a frequency variation signal to the oscillator.  In particular, at start up, the frequency is divided by 4 (f/4). When the voltage across soft-start capacitor C1 reaches 2.5V, the frequency returns to its normal value, f. See p. 3 of TEA 2262 datasheet (C1 is soft-start capacitor); p. 6 ("During starting phase, in order to avoid transformer magnetization (especially at high frequency), the frequency oscillator is divided by four. At switch-on, C_o charging current is divided by four. It recover [sic] its normal value when the voltage on soft-start capacitor reach [sic] 2.5 V.") As shown in the block diagram, the frequency variation signal is internal. It varies cyclically in magnitude during burst mode. *See* TEA 2262 datasheet p.2, (block diagram) and p. 6, and associated application note AN376, p. 13. As described in AN376, the burst mode of TEA 2262 is cyclic. Bursts are generated with a period that varies based on output power. AN376, p.2 (§ 1.2), p.3, Figure 2 (showing a typical burst period of 30 ms). Soft-start is repeated at the beginning of each burst. AN 376, p. 13. The variation of frequency between f/4 and f, which depends upon the discharging of soft-start capacitor C1, likewise repeats with each burst. TEA 2262 datasheet p. 5.

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA2262
	The frequency variation signal modulates the frequency of the oscillation signal within a predetermined range of the oscillator's typical operating frequency (f) and 25% of its typical operating frequency (f/4). *See* TEA2262 datasheet p. 2, (block diagram) and p. 6.
an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state; and	In both embodiments: TEA2262 datasheet p. 2, Block Diagram: The TEA2262 switch includes an oscillator, which provides a maximum duty cycle signal, *i.e.*, a pulse signal, comprising an on-state and an off-state. This oscillator provides an oscillation signal that varies with respect to the voltage on pin 9, the frequency variation signal, as described above. 
a drive circuit that provides said drive signal when said maximum duty cycle signal is in said first state and a magnitude of said oscillation signal is below a variable threshold level.	In both embodiments: The TEA2262 includes a drive circuit and drive signal as labeled on the block diagram included above on page 9. TEA2262 datasheet p. 2, Block Diagram. The drive circuit provides the drive signal according to the maximum duty cycle signal shown on the diagram as the square wave out of the oscillator. TEA2262 datasheet p. 2, Block Diagram. Furthermore, as shown below one of the comparators labeled "modulators" on the block diagram compares the oscillator sawtooth to a variable threshold level, error amplifier output (S), in order to set the duty cycle of the drive signal.

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA2262
	

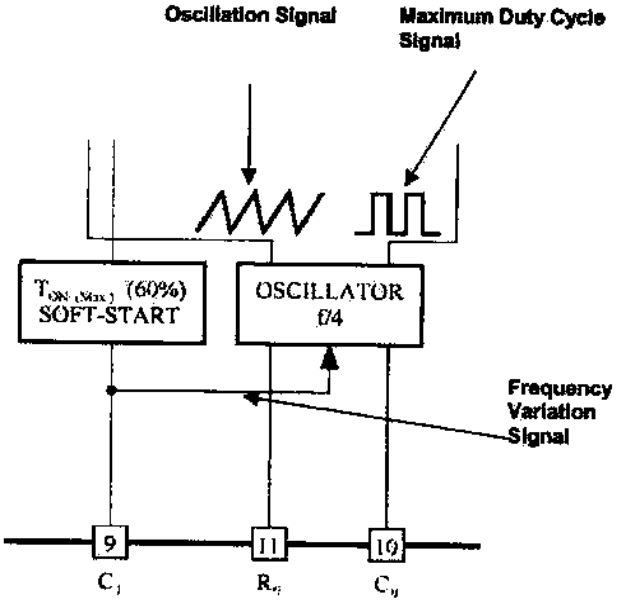
b. **Claim 2**

Dependent Claim 2 adds to Claim 1 the limitation that the pulse width modulated switch be a monolithic device. Because Claim 2 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 2 are anticipated. As detailed in the table below, the TEA2262 discloses each and every limitation of Claim 2 and, accordingly, anticipates Claim 2 under 35 U.S.C. § 102 (a) and (b).

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA 2262
2. The pulse width modulated switch of claim 1 wherein said first terminal, said second terminal, said switch, said oscillator, said frequency variation circuit and said drive circuit comprise a monolithic device.	As page one of the data sheet indicates "the TEA 2262 is a monolithic integrated circuit." The Block Diagram shows that the switch, terminals, oscillator, drive circuit and frequency variation circuit are all included in the TEA 2262 Circuit. *See* TEA 2262 datasheet, p. 2, Block Diagram (reproduced above at p. 9, with elements labeled).

c. **Claim 4**

Dependent Claim 4 adds to Claim 1 the limitation of a soft-start circuit. Because Claim 4 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 4 are anticipated. As detailed in the table below, the TEA2262 discloses each and every limitation of Claim 4 and, accordingly, anticipates Claim 2 under 35 U.S.C. § 102 (a) and (b).

4. The pulse width modulated switch of claim 1 further comprising a soft start circuit that provides a signal instructing said drive circuit to discontinue said drive signal when said magnitude of said oscillation signal is greater than a magnitude of said frequency variation signal.	TEA2262 datasheet p. 2, Block Diagram. The frequency variation signal is also used as the soft-start signal. By comparing the soft-start (or frequency variation) signal with respect to the sawtooth out of the oscillator, the drive signal's duty cycle is adjusted with respect to the frequency variation signal.  The soft-start circuit disclosed in Figure 2 appears to read on the structures disclosed by the '851 patent, which also compares a sawtooth out of an oscillator with the magnitude of the frequency variation signal to adjust the duty cycle of the drive signal.

d. **Claim 7**

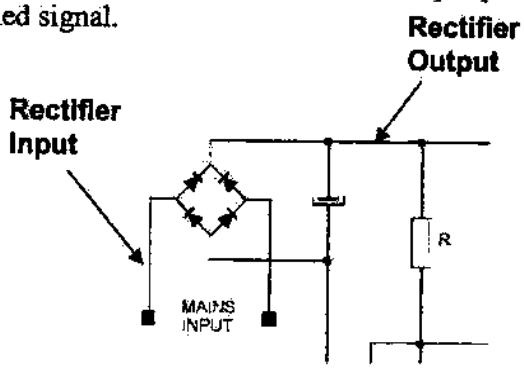
Dependent Claim 7 adds to Claim 1 the limitation that the frequency of the oscillation signal varies with the magnitude of the frequency variation signal. Because Claim 7 depends on Claim 1, all

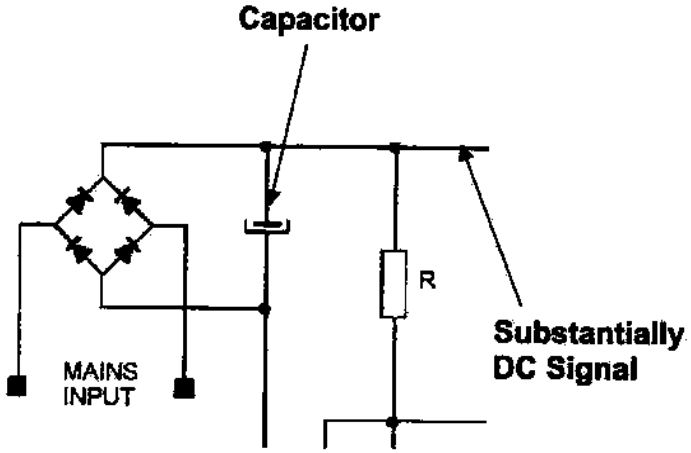
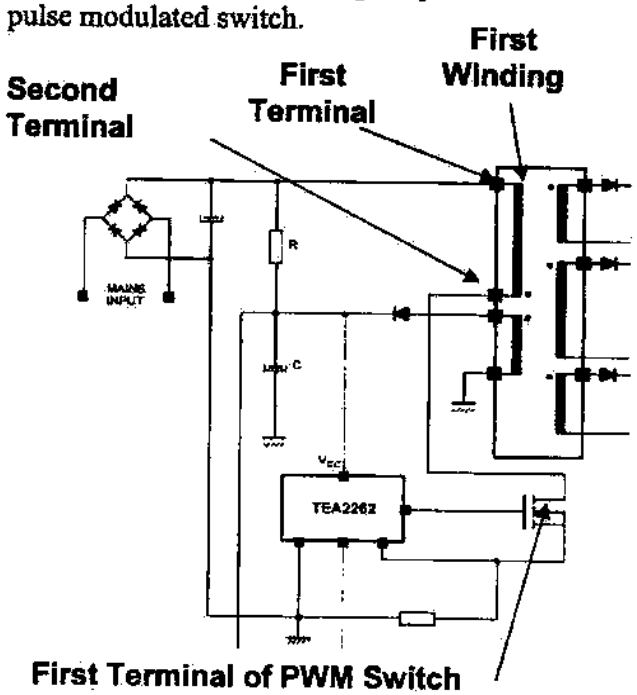
limitations of Claim 1 incorporated into Claim 7 are anticipated. As detailed in the table below, the TEA2262 discloses each and every limitation of Claim 7 and, accordingly, anticipates Claim 7 under 35 U.S.C. § 102 (a) and (b).

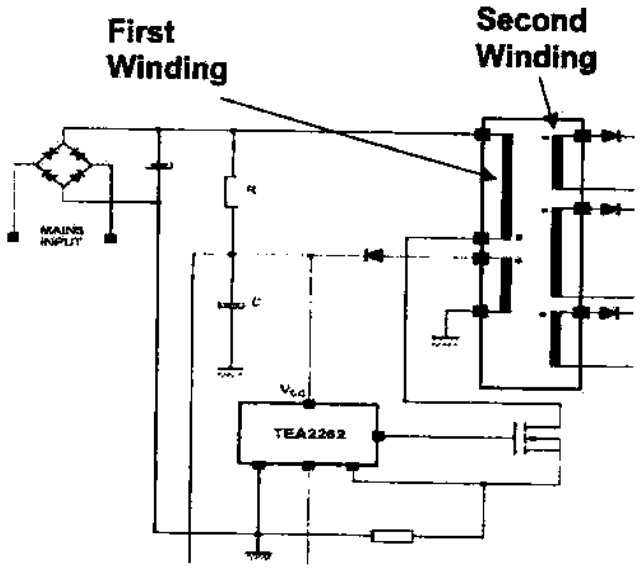
U.S. Patent No. 6,137,703	[illegible]
7. The pulse width modulated switch of claim 1 wherein said frequency of said oscillation signal varies within said frequency range with a magnitude of said frequency variation signal.	The frequency of the oscillation signal varies between its typical frequency and 1/4th of its typical frequency, depending on the magnitude of the frequency variation signal (as determined by measuring the magnitude of the voltage on pin 9, provided to the soft-start capacitor). *See* TEA 2262 data sheet, p.6 and block diagram at p. 2.

e. **Claim 9**

Dependent Claim 9 adds to claim 1 the limitation of a rectifier comprising a rectifier input and a rectifier output, the rectifier input receiving an AC mains signal and the rectifier output providing a rectified signal. Because Claim 9 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 9 are anticipated. As detailed in the table below, the TEA2262 discloses each and every limitation of Claim 9 and, accordingly, anticipates Claim 9 under 35 U.S.C. § 102 (a) and (b).

U.S. Patent [illegible]	[illegible]
9. The pulse width modulated switch of claim 1 further comprising;	In the second embodiment: The TEA2262 meets every element of Claim 1, as set forth above.
a rectifier comprising a rectifier input and a rectifier output, said rectifier input receiving an AC mains signal and said rectifier output providing a rectified signal;	TEA2262 datasheet p. 5, Figure 2: The TEA2262 discloses a rectifier comprising an input and an output with the input receiving an AC mains signal and the output providing a rectified signal. 

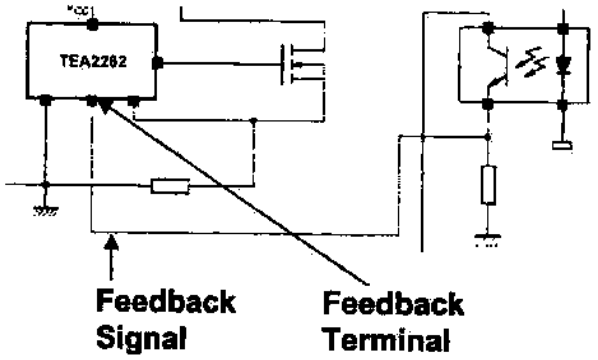
U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA 2262
a power supply capacitor that receives said rectified signal and provides a substantially DC signal;	EA2262 datasheet p. 5, Figure 2: The TEA2262 discloses a power supply capacitor that receives the rectified signal from the rectifier and provides a substantially DC signal. 
a first winding comprising a first terminal and a second terminal, said first winding receiving said substantially DC signal, said second terminal of said first winding coupled to said first terminal of said switch; and	TEA2262 datasheet p. 5, Figure 2: The TEA2262 discloses a first winding having a first terminal and a second terminal. The first winding receives the substantially DC signal with the second terminal of the first winding coupled to the first terminal of the pulse modulated switch. 
a second winding magnetically coupled to said first winding.	TEA2262 datasheet p. 5, Figure 2: The TEA2262 discloses a second winding magnetically coupled to the first winding.

U.S. Patent No. 6,107,851	Anticipated by: SGS-Thomson TEA2262
	

f. **Claim 10**

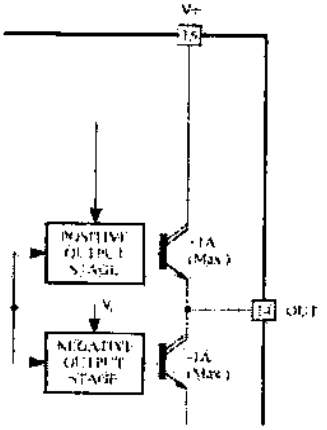
Dependent Claim 10 adds to Claim 1 the limitation that the variable threshold level is a function of a feedback signal received at a feedback terminal of the pulse width modulated switch. Because Claim 10 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 10 are anticipated. As detailed in the table below, the TEA2262 discloses each and every limitation of Claim 10 and, accordingly, anticipates Claim 10 under 35 U.S.C. § 102 (a) and (b).

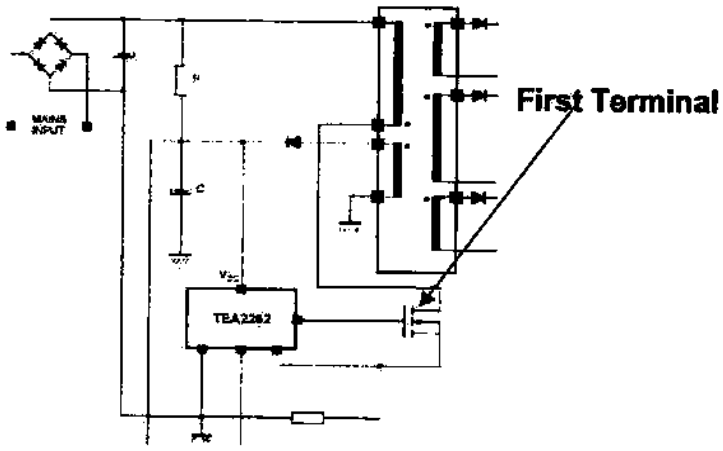
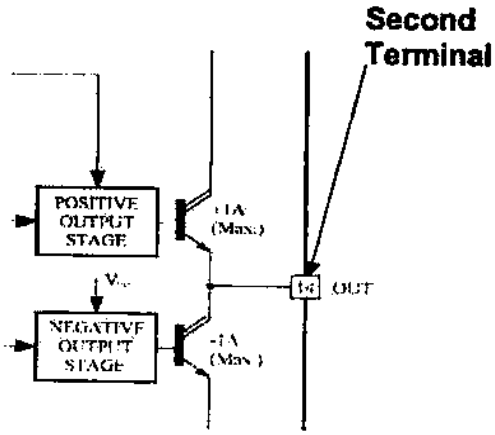
U.S. Patent No. 6,107,851	Anticipated by: SGS-Thomson TEA2262
10. The pulse width modulated switch of claim 1 wherein said variable threshold level is a function of a feedback signal received at a feedback terminal of said pulse width modulated switch.	TEA2262 datasheet Figure 2 and Block Diagram pp. 5 and 2: Figure 2 shows a feedback signal from the opto-coupler to the TEA2262 device. The block diagram shows that the feedback signal, which connects to the input of the error amplifier at pin 6, sets the variable threshold input to the modulator.

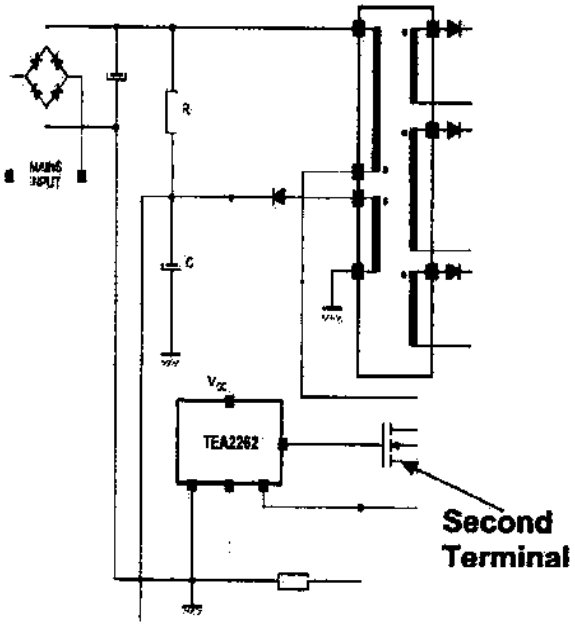
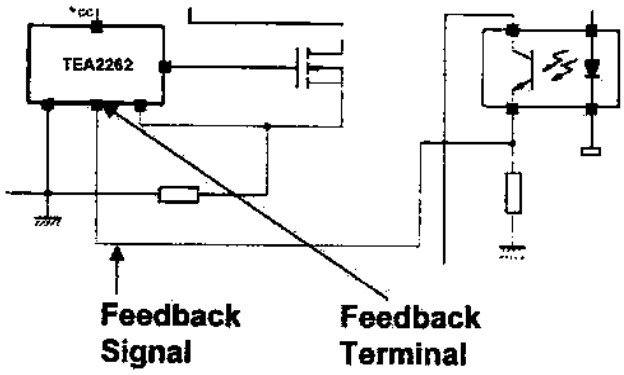
U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA 2262
	

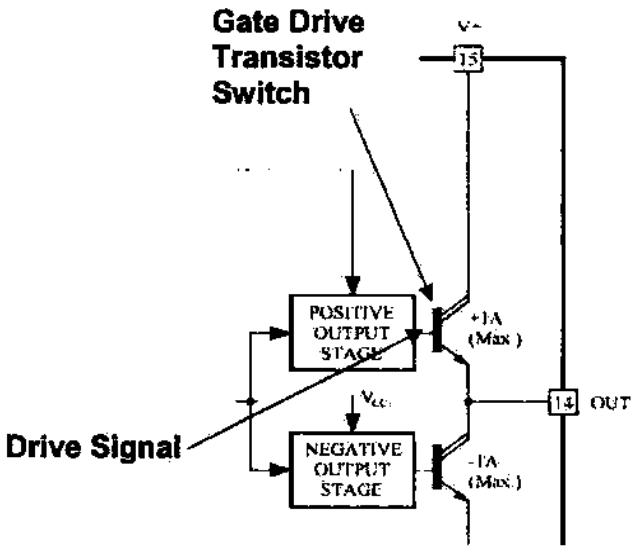
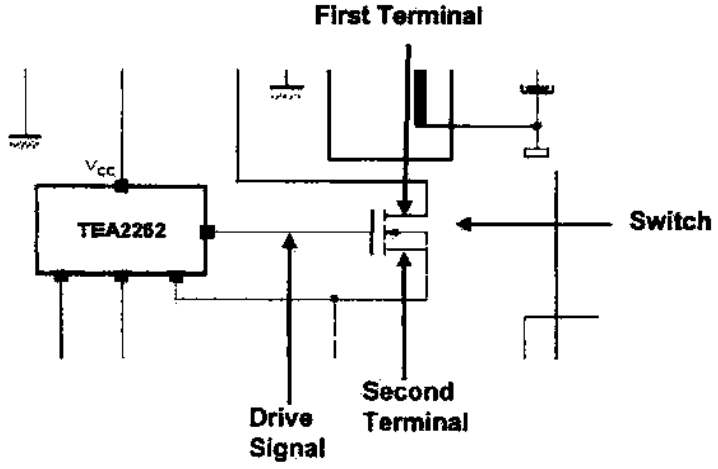
g. **Claim 11**

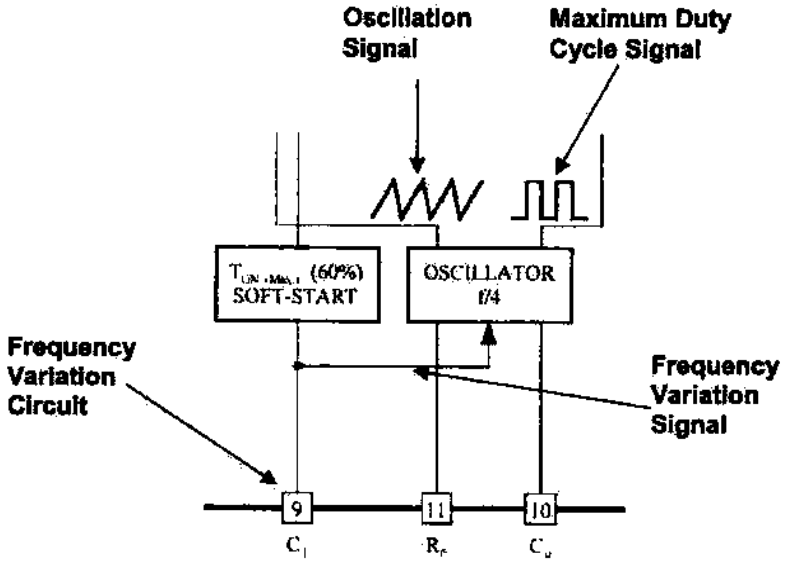
As established above, the TEA2262 anticipates Claim 1. Because Claim 11 contains substantially the same limitations as Claim 1, all limitations of Claim 11 are anticipated for the reasons provided above. As detailed in the table below, the TEA2262 discloses each and every limitation of Claim 11 and, accordingly, anticipates Claim 11 under 35 U.S.C. § 102 (a) and (b).

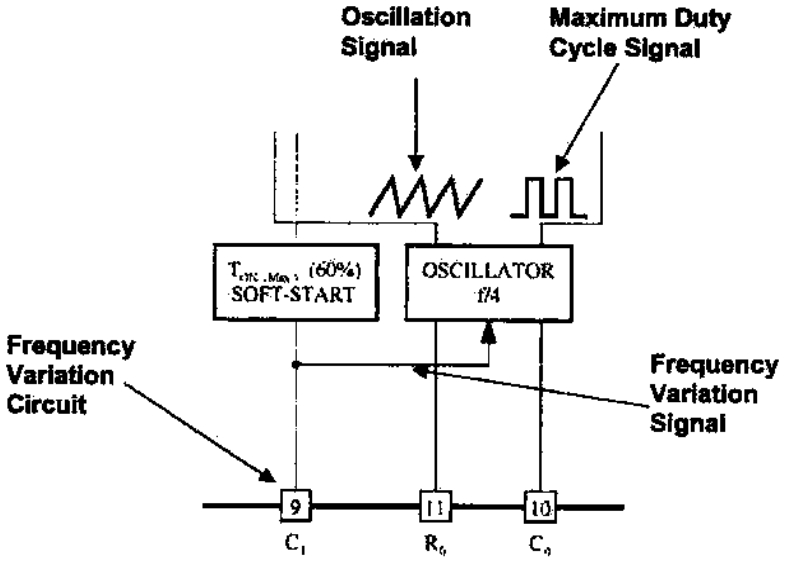
U.S. Patent No. 6,107,851	
11. A regulation circuit comprising:	TEA2262 datasheet pp. 2 and 5: The TEA2262 is a switch mode power supply controller. Two embodiments of the TEA2262 anticipate the claims of the '851 patent.
a first terminal;	In the first embodiment: TEA2262 datasheet p. 2, Block Diagram: The TEA2262 switch has a first terminal, V+, shown as pin 15. 

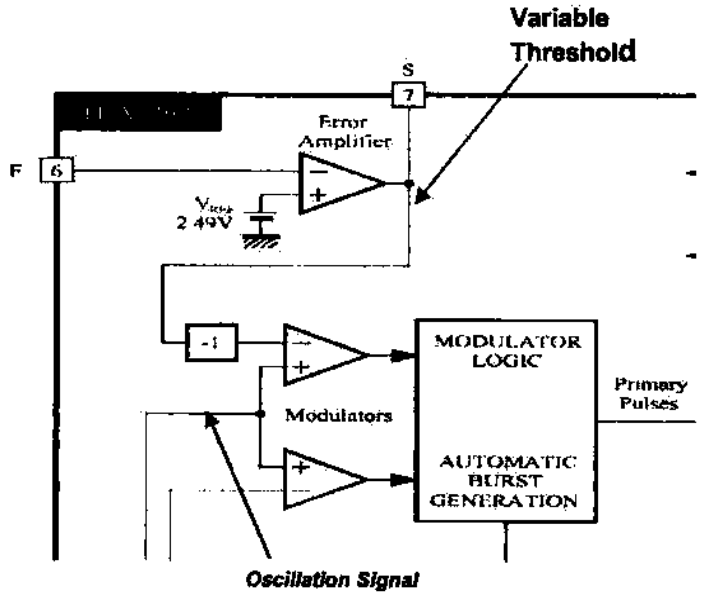
U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA 2262
	In the second embodiment: TEA2262 datasheet p. 5, Figure 2: The first terminal is the terminal of the external transistor connected to one terminal of the primary winding of the transformer. 
a second terminal;	In the first embodiment: TEA2262 datasheet p. 2, Block Diagram: The TEA2262 switch has a second terminal, OUT, shown as pin 14.  In the second embodiment: TEA2262 datasheet p. 5, Figure 2: The second terminal is the terminal of the external transistor connected to ground through a sense resistor.

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA 2262
	
a feedback terminal coupled to disable the regulation circuit;	TEA2262 datasheet p. 5, Figure 2 shows an optocoupler used as a feedback source to transmit a feedback signal to the feedback terminal of the TEA2262 device which is coupled to disable the regulation circuit. See discussion at TEA2262 datasheet, p. 6. 
a switch comprising a control input, said switch allowing a signal to be transmitted between said first terminal and said second terminal according to a drive signal provided at said control	In the first embodiment: TEA2262 datasheet p. 2, Block Diagram: The TEA2262 includes a switch, *i.e.*, a gate drive transistor switch, which has a control input (from a positive output stage). The gate drive transistor switch allows a signal to be transmitted between the

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA 2262
input;	first terminal, V+, and the second terminal, OUT, according to a drive signal provided at the control input from the positive output stage.  In the second embodiment: TEA2262 datasheet p. 5, Figure 2: The TEA2262 is connected to a switch comprising a control input, the switch allowing a signal to be transmitted between the first terminal and the second terminal according to a drive signal provided at said control input. 
a frequency variation circuit that	In both embodiments:

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA 2262
provides a frequency variation signal;	TEA2262 datasheet p.2, block diagram: The soft-start circuit and capacitor on pin 9 (C1) is a frequency variation circuit that provides a frequency variation signal to the oscillator.  In particular, at start up, the frequency is divided by 4 (f/4). When the voltage across soft-start capacitor C1 reaches 2.5V, the frequency returns to its normal value, f. See p. 3 of TEA 2262 datasheet (C1 is soft-start capacitor); p. 6 ("During starting phase, in order to avoid transformer magnetization (especially at high frequency), the frequency oscillator is divided by four. At switch-on, C_o charging current is divided by four. It recover [sic] its normal value when the voltage on soft-start capacitor reach [sic] 2.5 V.") As shown in the block diagram, the frequency variation signal is internal. It varies cyclically in magnitude during burst mode. *See* TEA 2262 datasheet p.2, (block diagram) and p. 6, and associated application note AN376, p. 13. As described in AN376, the burst mode of TEA 2262 is cyclic. Bursts are generated with a period that varies based on output power. AN376, p.2 (§ 1.2), p.3, Figure 2 (showing a typical burst period of 30 ms). Soft-start is repeated at the beginning of each burst. AN 376, p. 13. The variation of frequency between f/4 and f, which depends upon the discharging of soft-start capacitor C1, likewise repeats with each burst. TEA 2262 datasheet p. 5. The frequency variation signal modulates the frequency of the oscillation signal within a predetermined range of the oscillator's typical operating frequency (f) and 25% of its typical operating frequency (f/4). *See* TEA2262 datasheet p. 2, (block diagram) and p. 6.

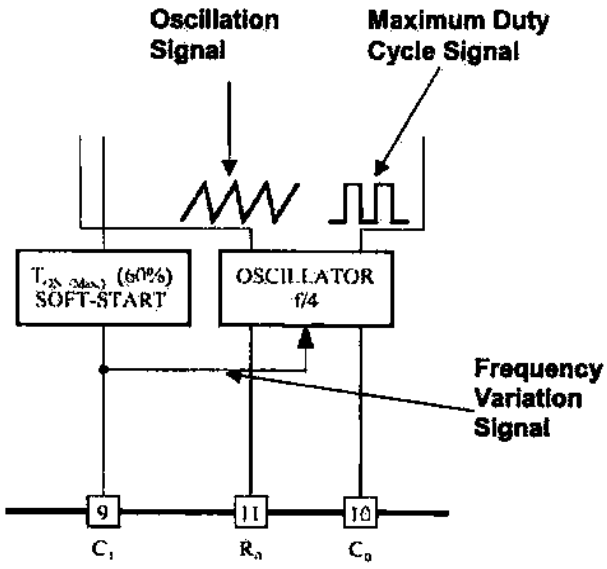
U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA2262
an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state; and	In both embodiments: TEA2262 datasheet p. 2, Block Diagram: The TEA2262 switch includes an oscillator, which provides a maximum duty cycle signal, *i.e.*, a pulse signal, comprising an on-state and an off-state. This oscillator provides an oscillation signal that varies with respect to the voltage on pin 9, the frequency variation signal, as described above. 
a drive circuit that provides said drive signal when said maximum duty cycle signal is in said first state and said regulation circuit is not disabled.	In both embodiments: The TEA2262 includes a drive circuit and drive signal as labeled on the block diagram included above on page 9. TEA2262 datasheet p. 2, Block Diagram. The drive circuit provides the drive signal according to the maximum duty cycle signal shown on the diagram as the square wave out of the oscillator. TEA2262 datasheet p. 2, Block Diagram. Furthermore, as shown below one of the comparators labeled "modulators" on the block diagram compares the oscillator sawtooth to a variable threshold level, error amplifier output (S), in order to set the duty cycle of the drive signal.

h. Claim 13

Dependent claim 13 depends from Claim 11, and merely adds the limitation of a soft start circuit. Because Claim 13 depends on Claim 11, all limitations of Claim 11 incorporated into Claim 13 are anticipated. As detailed in the table below, the TEA2262 discloses each and every limitation of Claim 13 and, accordingly, anticipates Claim 13 under 35 U.S.C. § 102 (a) and (b).

13. The regulation circuit of claim 11 further comprising a soft start circuit that provides a signal instructing said drive circuit to discontinue said drive signal according to a magnitude of said frequency variation signal.	TEA2262 datasheet p. 2, Block Diagram. The frequency variation signal is also used as the soft-start signal. By comparing the soft-start (or frequency variation) signal with respect to the sawtooth out of the oscillator, the drive signal's duty cycle is adjusted with respect to the frequency variation signal.

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA 2262
	 The soft-start circuit disclosed in Figure 2 appears to read on the structures disclosed by the '851 patent, which also compares a sawtooth out of an oscillator with the magnitude of the frequency variation signal to adjust the duty cycle of the drive signal.

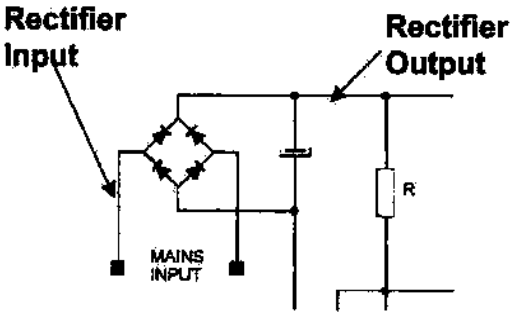
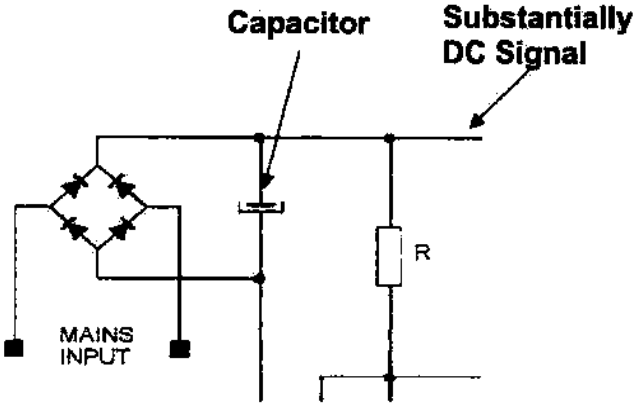
i. **Claim 16**

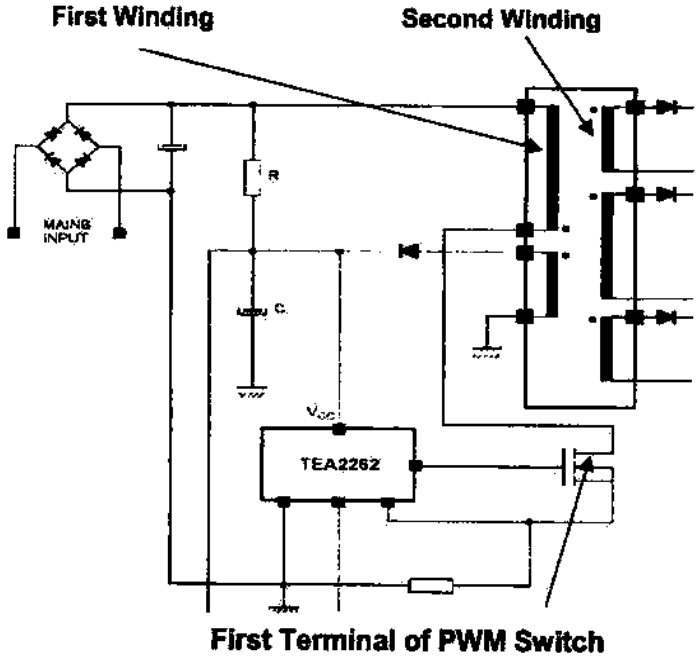
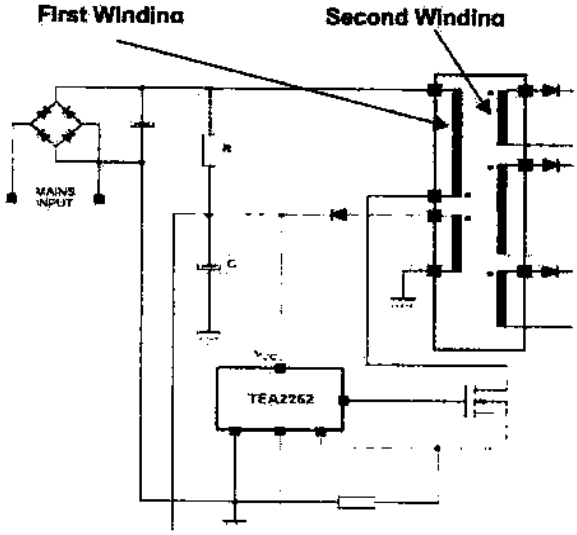
As established above, the TEA2262 anticipates claim 11. As Claim 16 depends on Claim 11, it is established that all limitations of Claim 11 incorporated into Claim 16 are anticipated. Claim 16 adds the limitation that the device of Claim 11 is a monolithic device. As detailed in the table below, the TEA2262 discloses each and every limitation of Claim 16 and, accordingly, anticipates Claim 16 under 35 U.S.C. § 102 (a) and (b).

U.S. Patent No. 6,107,851	Anticipated by SGS-Thomson TEA 2262
16. The regulation circuit of claim 11 wherein said first terminal, said second terminal, said switch, said frequency variation circuit, and said drive circuit comprise a monolithic device.	As page one of the data sheet indicates "the TEA 2262 is a monolithic integrated circuit." The Block Diagram shows that the switch, terminals, oscillator, drive circuit and soft start circuit are all included in the TEA 2262 Circuit. *See* TEA 2262 datasheet, p. 2, Block Diagram (reproduced above at p. 9, with elements labeled).

j. Claim 17

As established above, the TEA2262 anticipates Claim 11. As Claim 17 depends from Claim 11, it is established that all limitations of Claim 11 incorporated into Claim 17 are anticipated. As detailed in the table below, the TEA2262 discloses each and every limitation of Claim 17 and accordingly, anticipates Claim 17 under 35 U.S.C. § 102 (a) and (b).

[illegible]	[illegible]
17. The regulation circuit of claim 11 further comprising;	In the second embodiment: The TEA2262 meets every element of claim 11, as set forth above.
a rectifier comprising a rectifier input and a rectifier output, said rectifier input receiving an AC mains signal and said rectifier output providing a rectified signal;	TEA2262 datasheet p. 5, Figure 2: The TEA2262 discloses a rectifier comprising an input and an output with the input receiving an AC mains signal and the output providing a rectified signal. 
a power supply capacitor that receives said rectified signal and provides a substantially DC signal;	TEA2262 datasheet p. 5, Figure 2: The TEA2262 discloses a power supply capacitor that receives the rectified signal from the rectifier and provides a substantially DC signal. 

U.S. Patent No. 6,107,851	Anticipated by [illegible] Thomson TEA 2262
a first winding comprising a first terminal and a second terminal, said first winding receiving said substantially DC signal, said second terminal of said first winding coupled to said first terminal of said switch; and	TEA2262 datasheet p. 5, Figure 2: The TEA2262 discloses a first winding having a first terminal and a second terminal. The first winding receives the substantially DC signal with the second terminal of the first winding coupled to the first terminal of the pulse modulated switch. 
a second winding magnetically coupled to said first winding.	TEA2262 datasheet p. 5, Figure 2: The TEA2262 discloses a second winding magnetically coupled to the first winding. 

B. SMP211 DATASHEET, ALONE OR IN COMBINATION WITH OTHER PRIOR ART, INVALIDATES CLAIMS 1, 2, 4, 7, 9, 10, 11, 13, 16, AND 17

The SMP211 datasheet (**Ref. CC**) anticipates Claims 1, 2, 7, 9, 10, 11, 16, and 17 of the '851 patent. 35 U.S.C. § 102 (a) and (b).

1. Disclosure of the SMP211 datasheet

The SMP211 datasheet has a "functional block diagram" of an integrated PWM switch mode power supply that includes a block labeled "oscillator," with outputs labeled D_{MAX}, CLOCK, and SAW. **Ref. CC**. In addition, Figure 3 and the waveforms shown next to these outputs are similar to those found in Figures 3, 6, and 9 of the '851 patent.

The '851 patent contains Figure 1, a block diagram labeled as "PRIOR ART." This block diagram includes pulse width modulated switch 90, labeled as "SMP211." During prosecution of the '851 patent, the Examiner specifically stated his reason for allowing the claims: that the prior art Figure 1 "did not include an oscillator for generating a maximum duty cycle signal and a singnal [sic] with a frequency range dependent on a frequency variation circuit..." The Examiner then rejected all other claims that lacked these limitations and allowed those that recited them.

In response, applicants amended the remaining rejected claims by adding the limitations that were allegedly missing from prior art Figure 1. The Examiner then allowed the remaining claims. However, Figure 1 does include an oscillator with a maximum duty cycle signal within the SMP211 device. Moreover, the description of prior art Figure 1 explicitly described how the frequency of that oscillator could be varied by a frequency variation circuit: "The jitter current 135 is used to vary the frequency of the saw-toothed waveform generated by the oscillator contained in the pulse width modulated switch 90." '851 patent at 3:14-17.

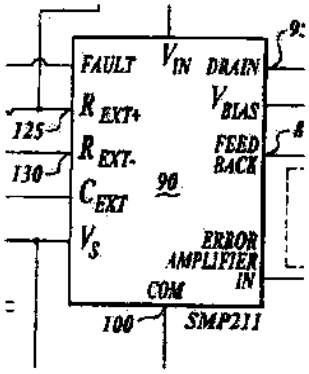
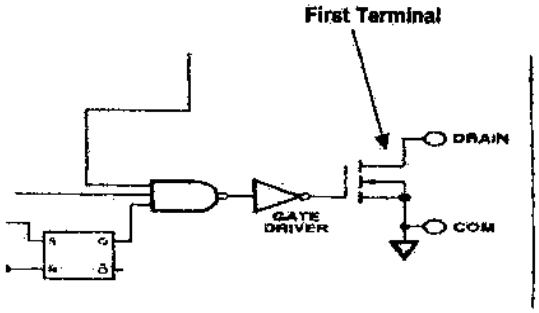
Applicants failed to submit to the Examiner SMP211 datasheets showing explicitly the existence of an oscillator with a D_{MAX} signal in SMP211. The SMP211 device depicted in Figure 1 is inherently the same as what the SMP211 datasheets described. The SMP211 datasheets, in conjunction with Figure 1 of the '851 patent, disclose each and every limitation of Claims 1, 2, 7, 9, 10, 11, 16, and 17 of the '851 patent, and accordingly, anticipate them.

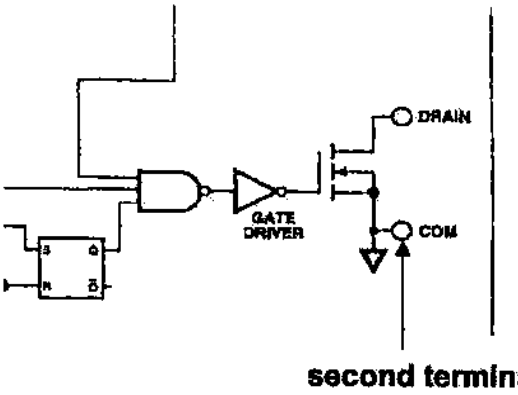
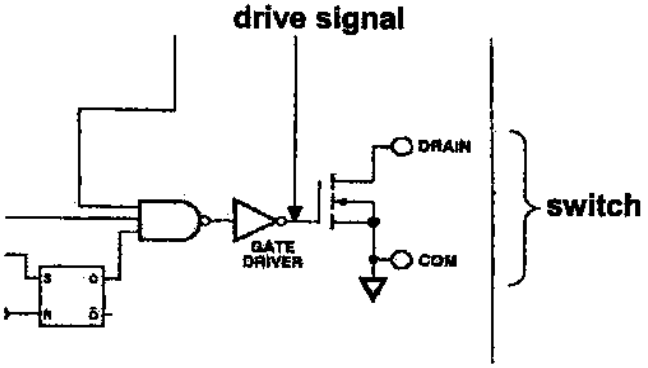
The SMP211 datasheet anticipates Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17.

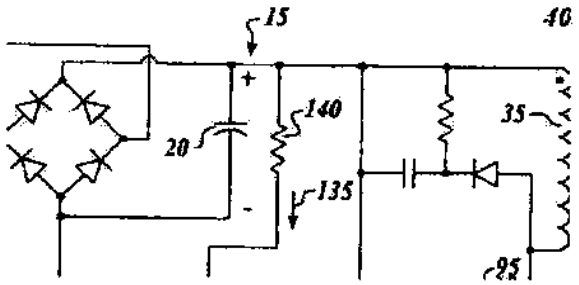
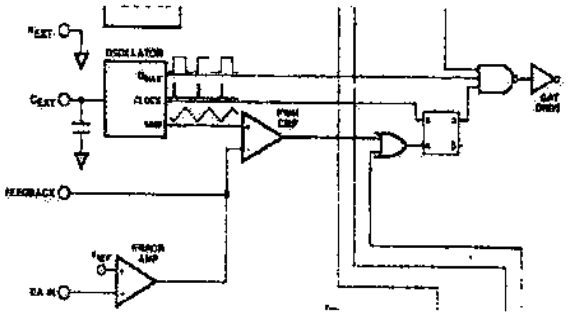
The SMP211 datasheet anticipates under 35 U.S.C. §102(a) and §102(b) claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 of the '851 patent. As detailed in the table below, it discloses each and every limitation of claims 1, 2, 4, 7, 9, 10, 11, 13,16, and 17.

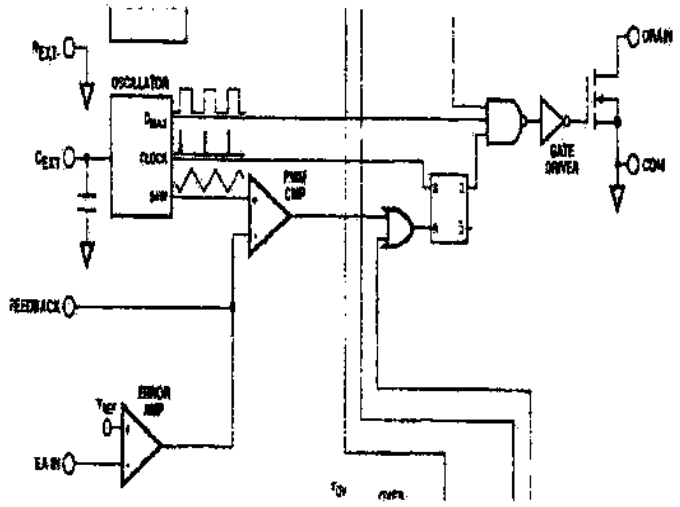
a. Claim 1

Claim 1 is an independent claim that the SMP211 datasheets anticipate. As detailed in the table below, the SMP211 datasheets disclose each and every limitation of Claim 1 and anticipate Claim 1 under 35 U.S.C. §102 (a) and (b).

1. A pulse width modulated switch comprising:	Figure 1 of the '851 patent includes a diagram of the SMP211 device. Therefore, the datasheet for the SMP211 device can be used as an additional reference, which, in combination with Figure 1, anticipates the referenced claims of the '851 patent. See MPEP § 2131.01.  The SMP211 device in Figure 1 is described as a pulse width modulated switch 90. *See* '851 Patent at 2:40-44.
a first terminal;	Figure 3 of the SMP211 datasheet shows a MOSFET switch with a drain, which is a first terminal. 

U.S. Patent No. 6,107,851	Anticipated by Figure 1 of '851 Patent and Datasheet for SMP211
a second terminal;	Figure 3 of the SMP211 datasheet shows a MOSFET switch with a source, labeled "COM", which is a second terminal. 
a switch comprising a control input, said switch allowing a signal to be transmitted between said first terminal and said second terminal according to a drive signal provided at said control input;	Figure 3 of the SMP211 datasheet shows a MOSFET switch with a gate terminal that controls the switch, driven by a gate driver with a drive signal. 
a frequency variation circuit that provides a frequency variation signal;	The specification of the '851 patent describes resistor 140 of Figure 1 as a frequency variation circuit. The jitter current 135 is the frequency variation signal, used to vary the frequency of the oscillator. See '851 patent 3:14-17 (describing prior art Figure 1: "The jitter current is used to vary the frequency of the saw-toothed waveform generated by the oscillator contained in the pulse width modulated switch 90.")

U.S. Patent No. 6,107,851	Anticipated by Figure 3 of '851 Patent and Datasheet for PWR-SMP211
	
an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state; and	Figure 3 of the SMP211 datasheet shows an oscillator whose frequency varies with respect to a jitter current 135 that varies within a frequency range determined by the ripple component of substantially DC voltage 15, which is obtained initially from an AC mains voltage operating at 60 Hz. *See* 3:10-13 and Fig. 1; 2:27-30. The oscillator generates a duty cycle signal ("D_{MAX}") that drives a 3-input NAND gate, which then drives a gate driver to switch the output MOSFET. The duty cycle signal includes a first state (high or on) and a second state (low or off). 
a drive circuit that provides said drive signal when said maximum duty cycle signal is in said first state and a magnitude of said oscillation signal is below a variable threshold level.	Figure 3 of the SMP211 datasheet shows the drive signal has a duty cycle that cannot be greater that the duty cycle of D_{MAX} from the oscillator. The D_{MAX} signal is fed into a NAND gate which will provide the signal to the gate driver only when the maximum duty cycle is in the first state. Moreover, Figure 3 shows a PWM comparator that compares the magnitude of the sawtooth signal out of the oscillator with the output of the error amplifier (the variable threshold). The output of this comparison is also coupled to an input of the NAND gate. The

U.S. Patent No. 6,107,851	Anticipated by Figure 1 of '851 Patent and Datasheet for PWR-SMP211
	oscillation signal must be below the threshold level for the NAND gate to provide a signal to the gate driver. *See also* discussion at p. 2-49 of SMP211 Datasheet under "Pulse Width Modulator." 

b. **Claim 2**

Dependent claim 2 adds to Claim 1 the limitation that the device of Claim 1 is a monolithic device. As established above, the SMP 211 datasheets anticipate Claim 1. Because Claim 2 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 2 are anticipated. One of ordinary skill in the art would have been motivated to combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention. As detailed in the table below, the SMP 211 datasheet discloses each and every limitation of Claim 2 and, accordingly, anticipates Claim 2 under 35 U.S.C. § 102 (a) and (b).

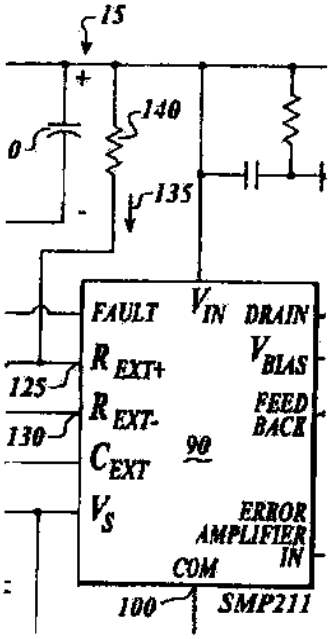
U.S. Patent No. 6,107,851	Anticipated by Figure 1 of '851 Patent and Datasheet for PWR-SMP211
2. The pulse width modulated switch of claim 1 wherein said first terminal, said second terminal, said switch, said frequency variation circuit and said drive circuit comprise a monolithic device.	One of ordinary skill in the art at the time of the invention would have been motivated to combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention.

U.S. Patent No. 6,101,851	Anticipated by Figure 1 of '851 Patent and Datasheet for PWR-SMP211
	Indeed, the Examiner rejected claim 34 as initially filed (corresponding to this claim, except reciting "regulation circuit" instead of "pulse width modulated switch") as obvious under 35 U.S.C. § 103(a) for exactly this reason. *See* p. 5 of (non-final) Office Action of 12/13/99 in the file history of the '851 patent. Power Integrations did not dispute the Examiner's objection, but instead amended then claim 29, the independent claim from which dependent claim 34 depended, to include an oscillator. *See* pp. 6-7 of Amendment and Response dated 3/11/00.

c. **Claim 7**

Dependent Claim 7 adds to Claim 1 the limitation that the frequency of the oscillation signal varies with the magnitude of the frequency variation signal. Because Claim 7 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 7 are anticipated. As detailed in the table below, the SMP211 datasheet discloses each and every limitation of Claim 7 and, accordingly, anticipates Claim 7 under 35 U.S.C. § 102 (a) and (b).

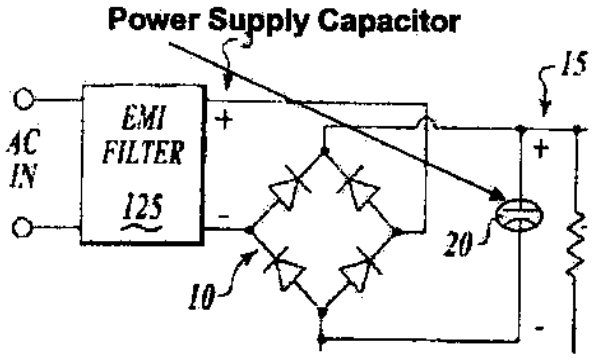
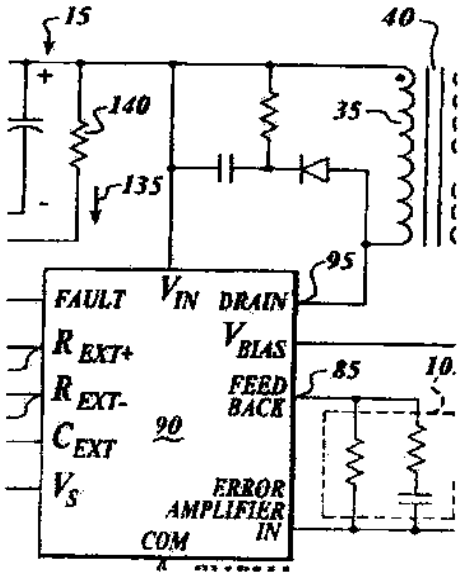
U.S. Patent No. [illegible]	[illegible]
7. The pulse width modulated switch of claim 1 wherein said frequency of said oscillation signal varies within said frequency range with a magnitude of said frequency variation signal.	The circuit shown in Figure 1 of '851 and the SMP211 device anticipate all elements of claim 1. Furthermore, the oscillation frequency of the oscillator varies within a range with respect to the magnitude of the frequency variation signal. *See* '851 Patent, 3:14-17 ("The jitter current 135 is used to vary the frequency of the saw-tooth waveform generated by the oscillator contained in the pulse width modulated switch 90.")

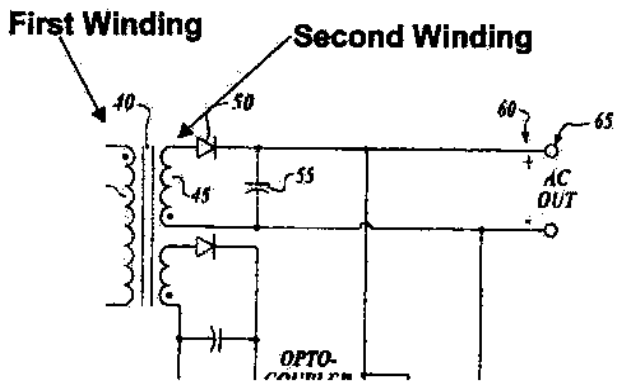
U.S. Patent No. 6,107,851	Anticipated by Figure 1 of '851 Patent and Datasheet for PWR-SMP211
	

d. **Claim 9**

Dependent Claim 9 adds to Claim 1 the limitation of a rectifier comprising a rectifier input and a rectifier output, the rectifier input receiving an AC mains signal and the rectifier output providing a rectified signal. Because Claim 9 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 9 are anticipated. As detailed in the table below, the SMP211 datasheet discloses each and every limitation of Claim 9 and, accordingly, anticipates Claim 9 under 35 U.S.C. § 102 (a) and (b).

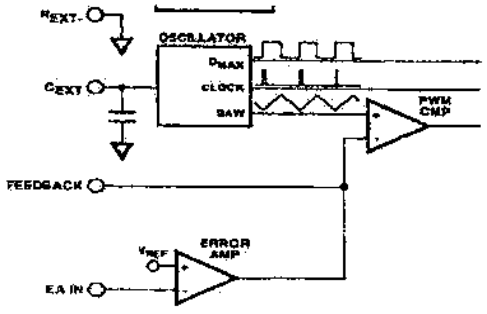
U.S. Patent No. 6,107,851	Anticipated by Figure 1 of '851 Patent and Datasheet for PWR-SMP211
9. The pulse width modulated switch of claim 1 further comprising;	The circuit shown in Figure 1 of '851 and the SMP211 device anticipate all elements of claim 1.
a rectifier comprising a rectifier input and a rectifier output, said rectifier input receiving an AC mains signal and said rectifier output	Figure 1 of the '851 shows a diode bridge rectifier with an AC input and DC output.

U.S. Patent No. 6,107,851	Anticipated by Figure 1 of '851 Patent and Datasheet for FAN6211
providing a rectified signal;	
a power supply capacitor that receives said rectified signal and provides a substantially DC signal;	Figure 1 of '851 shows a power supply capacitor across the rectified DC output of the diode bridge rectifier. 
a first winding comprising a first terminal and a second terminal, said first winding receiving said substantially DC signal, said second terminal of said first winding coupled to said first terminal of said switch; and	Figure 1 of '851 shows a transformer with one winding connected to the drain terminal of SMP211 device and the rectified DC voltage. 
a second winding magnetically coupled to said first winding.	Figure 1 of '851 shows a second winding magnetically coupled to the first winding and connected to the output (which should correctly read DC OUT).

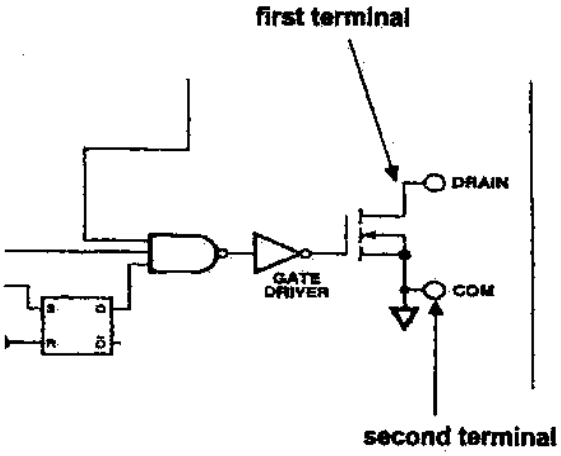
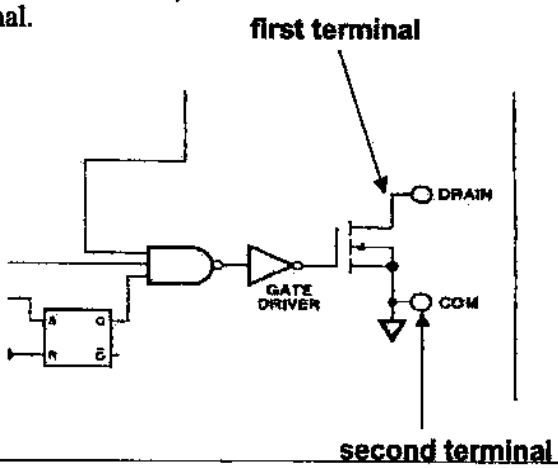
e. **Claim 10**

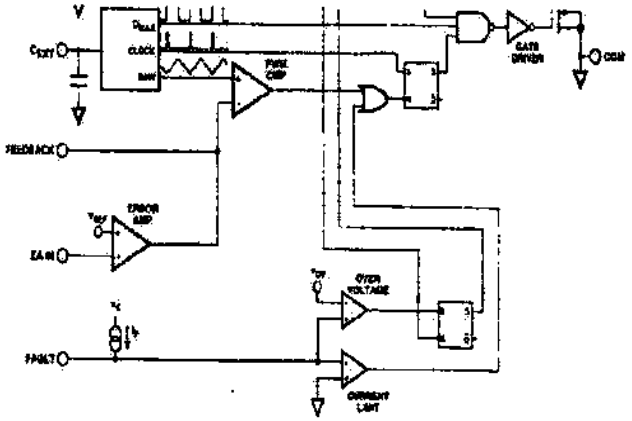
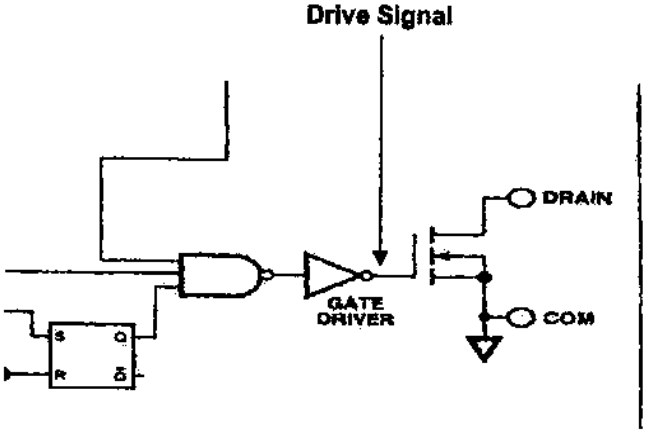
Dependent Claim 10 adds to Claim 1 the limitation that the variable threshold level is a function of a feedback signal received at a feedback terminal of the pulse width modulated switch. Because Claim 10 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 10 are anticipated. As detailed in the table below, the SMP211 datasheet discloses each and every limitation of Claim 10 and, accordingly, anticipates Claim 10 under 35 U.S.C. § 102 (a) and (b).

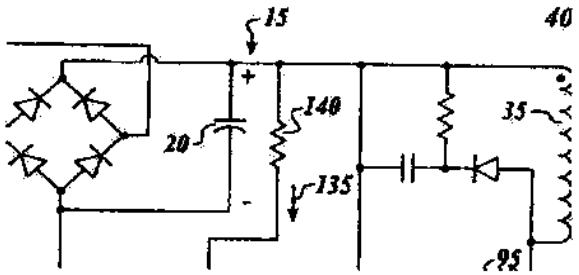
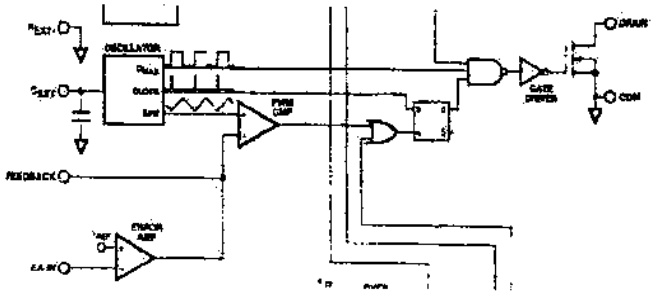
10. The pulse width modulated switch of claim 1 wherein said variable threshold level is a function of a feedback signal received at a feedback terminal of said pulse width modulated switch.	The circuit shown in Figure 1 of '851 and the SMP211 device anticipate all elements of claim 1. Moreover, the functional block diagram (Figure 3) of the PWR-SMP211 datasheet shows the variable threshold into the PWM comparator is connected to the feedback terminal of the device. 

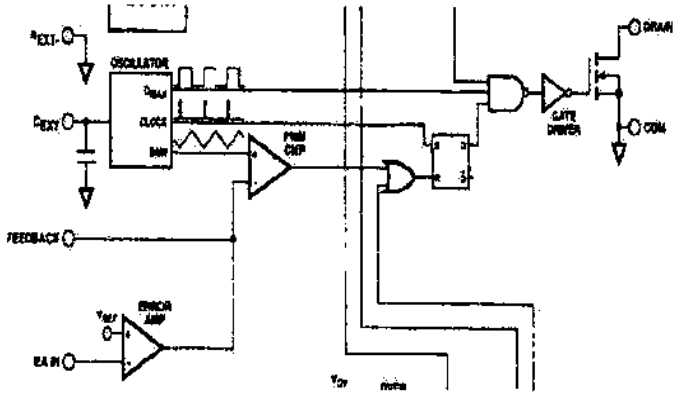
f. Claim 11

As established above, the SMP211 datasheet anticipates Claim 1. Because Claim 11 contains substantially the same limitations as Claim 1, all limitations of Claim 11 are anticipated for the reasons provided above. As detailed in the table below, the SMP211 datasheet discloses each and every limitation of Claim 11 and, accordingly, anticipates Claim 11 under 35 U.S.C. § 102 (a) and (b).

U.S. Patent No. [illegible]	[illegible]
11. A regulation circuit comprising:	The SMP211 device in Figure 1 of the '851 is a regulation circuit.
a first terminal;	Figure 3 of the SMP211 datasheet shows a MOSFET switch with a drain, which is a first terminal. 
a second terminal;	Figure 3 of the SMP211 datasheet shows a MOSFET switch with a source, labeled "COM" which is a second terminal. 

U.S. Patent No. 6,107,851	Anticipated by Figure 1 of '851 Patent and Datasheet for SMP211
a feedback terminal coupled to disable the regulation circuit;	Figure 3 of the SMP211 datasheet shows several terminals (Feedback, EA_{in}, Fault, V_{OV}) that can all disable the regulation circuit. 
a switch comprising a control input, said switch allowing a signal to be transmitted between said first terminal and said second terminal according to a drive signal provided at said control input;	Figure 3 of the SMP211 datasheet shows a MOSFET switch with a gate terminal that controls the switch, driven by a gate driver with a drive signal. 
a frequency variation circuit that provides a frequency variation signal;	The specification of the '851 patent describes resistor 140 of Figure 1 as a frequency variation circuit. The jitter current 135 is the frequency variation signal, used to vary the frequency of the oscillator. See '851 patent 3:14-17 (describing prior art Figure 1: "The jitter current is used to vary the frequency of the saw-toothed waveform generated by the oscillator contained in the

U.S. Patent No. 6,107,851	Anticipated by Figure 3 of '851 Patent and Datasheet for SMP211
	pulse width modulated switch 90."). 
an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state; and	Figure 3 of the SMP211 datasheet shows an oscillator whose frequency varies with respect to a jitter current that varies within a frequency range determined by the ripple component of substantially DC voltage 15, which is obtained initially from an AC mains voltage operating at 60 Hz. *See* 3:10-13 and Fig. 1; 2:27-30. The oscillator generates a duty cycle signal ("D_{MAX}") that drives a 3-input NAND gate, which then drives a gate driver to switch the output MOSFET. The duty cycle signal includes a first state (high or on) and a second state (low or off). 
a drive circuit that provides said drive signal when said maximum duty cycle signal is in said first state and said regulation circuit is not disabled.	Figure 3 of the SMP211 datasheet shows the drive signal has a duty cycle that cannot be greater that the duty cycle of D_{MAX} from the oscillator. The D_{MAX} signal is fed into a NAND gate which will provide the signal to the gate driver only when the maximum duty cycle is in the first state. Moreover, Figure 3 shows a PWM comparator

	that compares the magnitude of the sawtooth signal out of the oscillator with the output of the error amplifier (the variable threshold). The output of this comparison is also coupled to an input of the NAND gate. The oscillation signal must be below the threshold level for the NAND gate to provide a signal to the gate driver. *See also* discussion at p. 2-49 of SMP211 Datasheet under "Pulse Width Modulator" 

g. Claim 16

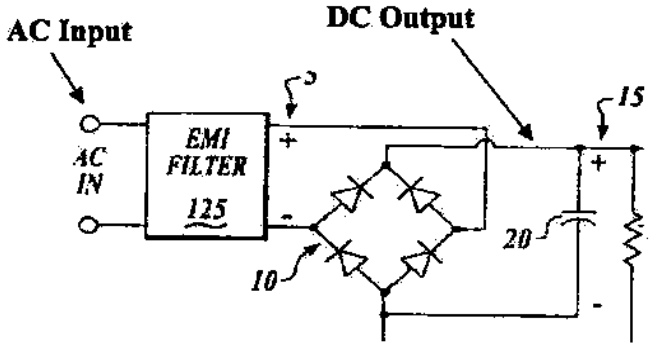
As established above, the SMP211 datasheet anticipates Claim 11. As Claim 16 depends on Claim 11, it is established that all limitations of Claim 11 incorporated into Claim 16 are anticipated. Claim 16 adds the limitation that the device of Claim 11 is a monolithic device. As detailed in the table below, the SMP211 datasheet discloses each and every limitation of Claim 16 and, accordingly, anticipates Claim 16 under 35 U.S.C. § 102 (a) and (b).

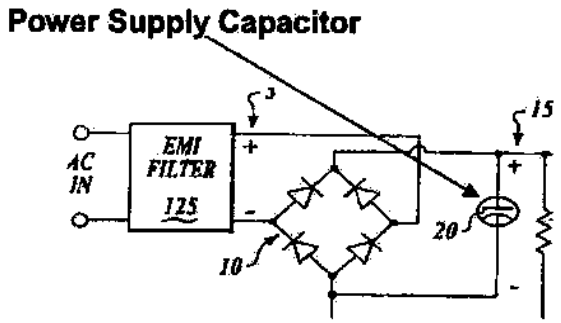
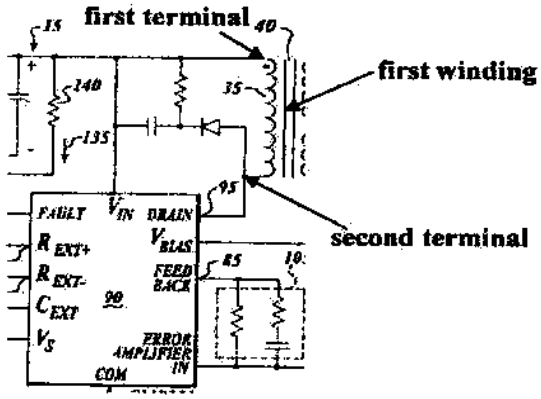
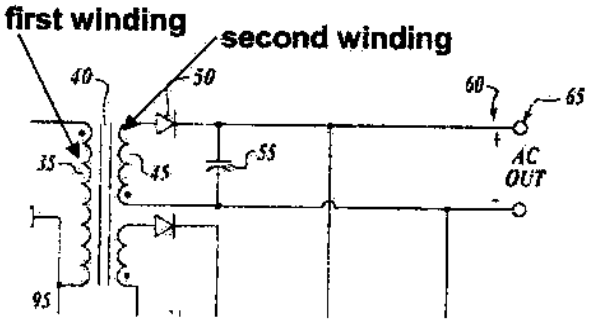
U.S. Patent No. 6,107,851	Anticipated by Figure 1 of '851 Patent and Datasheet for PWR-SMP211
16. The regulation circuit of claim 11 wherein said first terminal, said second terminal, said switch, said frequency variation circuit, and said drive circuit comprise a monolithic device.	One of ordinary skill in the art at the time of the invention would have been motivated to combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention.

U.S. Patent No. 6,107,851	Anticipated by Figure 1 of '851 Patent and Datasheet for LNK, SMP211
	Indeed, the Examiner rejected claim 34 as initially filed (corresponding to this claim, except reciting "regulation circuit" instead of "pulse width modulated switch") as obvious under 35 U.S.C. § 103(a) for exactly this reason. *See* p. 5 of (non-final) Office Action of 12/13/99 in the file history of the '851 patent. Power Integrations did not dispute the Examiner's objection, but instead amended then claim 29, the independent claim from which dependent claim 34 depended, to include an oscillator. *See* pp. 6-7 of Amendment and Response dated 3/11/00.

h. Claim 17

As established above, the SMP211 datasheet anticipates Claim 16. As Claim 17 depends on Claim 16, it is established that all limitations of Claim 16 incorporated into Claim 17 are anticipated. As detailed in the table below, the SMP211 datasheet discloses each and every limitation of Claim 17 and, accordingly, anticipates Claim 17 under 35 U.S.C. § 102 (a) and (b).

U.S. Patent No. 6,107,851	Anticipated by Figure 1 of '851 Patent and Datasheet for LNK, SMP211
17. The regulation circuit of claim 11 further comprising;	The circuit shown in Figure 1 of '851 and the SMP211 device anticipate all elements of claim 11.
a rectifier comprising a rectifier input and a rectifier output, said rectifier input receiving an AC mains signal and said rectifier output providing a rectified signal;	Figure 1 of '851 shows a diode bridge rectifier with an AC input and DC output. 
a power supply capacitor that receives said rectified signal and provides a substantially	Figure 1 of '851 shows a power supply capacitor receiving the rectified DC output of the diode bridge

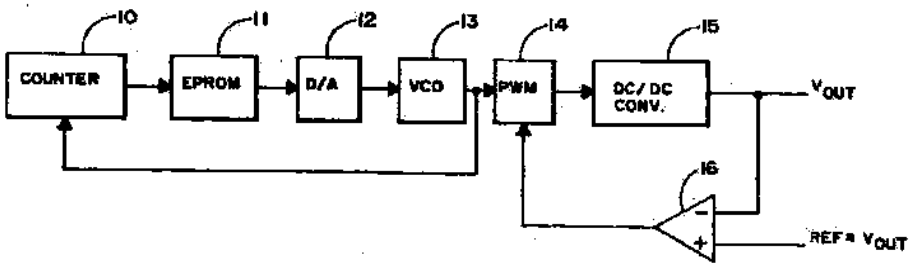
U.S. Patent No. 6,107,851	Figure 1 of '851 Patent and Datasheet for PWR-SMP211
DC signal;	rectifier and providing a substantially DC signal. 
a first winding comprising a first terminal and a second terminal, said first winding receiving said substantially DC signal, said second terminal of said first winding coupled to said first terminal of said switch; and	Figure 1 of '851 shows a transformer with one winding connected to the drain terminal of SMP211 device and to the rectified DC voltage. 
a second winding magnetically coupled to said first winding.	Figure 1 of '851 shows a second winding magnetically coupled to the first winding and connected to the output (which should correctly read DC OUT). 

C. THE MARTIN PATENT, ALONE OR IN COMBINATION WITH OTHER PRIOR ART, INVALIDATES CLAIMS 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17

The Martin patent **(Ref. AA)** anticipates or renders obvious Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 of the '851 patent. The Martin patent is a prior art reference under 35 U.S.C. § 102 (a) and (b).

1. Disclosure of the Martin Patent

The Martin patent discloses modulation of the operating frequency of an oscillator in a DC/DC power converter to achieve reduction of EMI. The Figure from Martin illustrates a pulse width modulated switch, an oscillator, a frequency variation circuit, and a drive circuit.



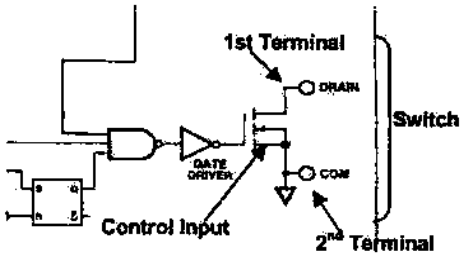
Counter 10, in combination with EPROM 11 and digital-to-analog converter 12, constitute a frequency variation circuit, which provides an (analog) frequency variation signal applied to voltage controlled oscillator (VCO) 13. VCO 13 produces an oscillating signal which has a frequency representative of the amplitude of the analog signal that VCO 13 receives from D/A converter 12. *See* Ex._ at 2:39-50. Pulse width modulator 14 provides a drive signal when the maximum duty cycle signal is in a high state and the magnitude of the oscillation signal is below a variable threshold level. The DC/DC converter 15 is a switch mode power supply, and could be any of a number of known power supplies including the SMP211. '417 2:49-53.

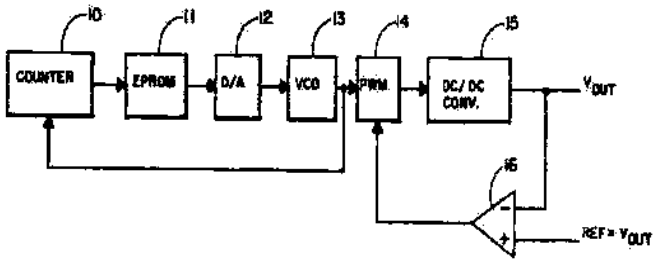
2. The Martin Patent Anticipates Claims 1, 2, 7, 9, 10, 11, 16, and 17 and in combination with Keller, renders obvious claims 4 and 13.

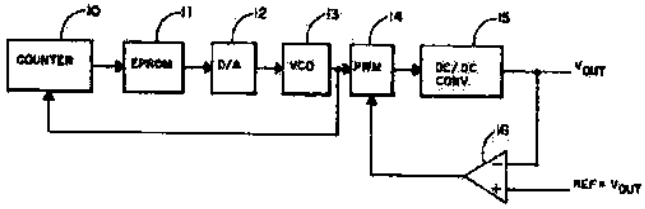
The Martin Patent anticipates under 35 U.S.C. § 102(a) and (b) Claims 1, 2, 7, 9, 10, 11, 16, and 17. Further, as is also detailed in the table below, Martin, in combination with the Keller reference, **(Ref. CF)** renders obvious Claims 4 and 13 under 35 U.S.C. § 103(a).

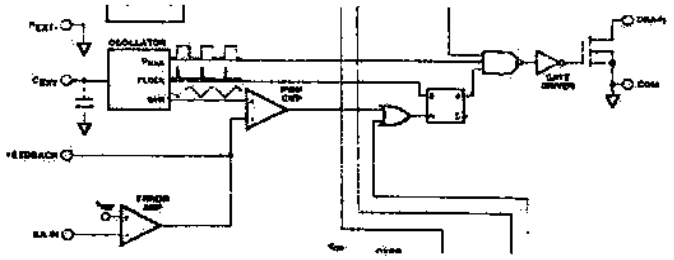
a. Claim 1

Claim 1 is an independent claim that is rendered obvious under 35 U.S.C. 103(a) by the Martin patent in combination with other prior art.

U.S. Patent No. 6,107,851	Application or Control No. [illegible]
1. A pulse width modulated switch comprising:	The Martin patent discloses a circuit for use with a switching mode power supply. '417 Patent, 1:49-53. The switch mode power supply (DC/DC converter 15 of Figure 1) inherently includes a switch. See also Wang and Sanders article entitled "Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters", published in October of 1993, referring to dc-dc converters as switching power supplies: "Programmed pulsewidth modulation techniques have been applied using various methods to control harmonics inherent in switched power circuits. In this paper, a method to generate an optimal programmed switching waveform for a dc-dc converter is presented." (Abstract, emphasis added). *See* p.596; *see also* p. 597 and Fig. 2 The operation of the switch contained in DC/DC converter 15 is pulse width modulated by pulse width modulator (PWM) 14. '417 Patent, 2:12-15. The SMP211 is an example of a switchmode power supply with a DC/DC converter. Figure 3 of the SMP211 datasheet shows a MOSFET switch. 
a first terminal;	The switch within DC/DC converter 15 inherently includes an input terminal. The switch of the SMP211 explicitly shows a 1st terminal. See diagram above.
a second terminal;	The switch within DC/DC converter 15 inherently includes an output terminal. The switch of the SMP211 explicitly shows a 2nd terminal. See diagram above.
a switch comprising a control input, said switch allowing a signal to be transmitted between said first terminal and said second	The gate terminal at the switch within DC/DC converter 15 comprises a control input. A signal is transmitted between the input terminal (first terminal) and output

U.S. Patent No. 6,107,[illegible]	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 to Martin, et al.
terminal according to a drive signal provided at said control input;	terminal (second terminal) according to the drive signal provided by pulse width modulator 14. The switch of the SMP211 explicitly shows a control input that allows a signal to be transmitted between the first and second terminals, and a drive signal provided to said input. See diagram above.
a frequency variation circuit that provides a frequency variation signal;	The counter 10, in combination with EPROM 11 and digital-to-analog (D/A) converter 12, constitute a frequency variation circuit, which provides an (analog) frequency variation signal applied to voltage controlled oscillator (VCO) 13.  "The output signal from the VCO 13 is also fed back to counter 10 which can be any suitable counter of any prescribed length." '417 patent, 2:20-22 (emphasis added). "The output of the counter 10 is connected to the input of EPROM 11 which can be any suitable kind of storage device.... The contents of the PROM 11 are stored in digital form. These digital signals are supplied to the digital-to-analog converter 12. The D/A converter 12 supplies an analog signal to the VCO 13." '417 patent, 2:20-22; 2:22-36. "Thus, as the output signal produced by VCO 13 varies in frequency, the counter 10 is caused to count at different rates. With counter 10 counting at different rates the EPROM 11 is stepped or addressed at different rates. The content of the PROM are ... a pseudo random code in digital form. The digital signal from the PROM 11 is converted to an analog signal by D/A converter 12. This analog signal is then applied to VCO 13 which produces an oscillating signal which has a frequency which is representative of the amplitude of the analog signal." '417 patent, 2:20-22, 2:39-49 (emphasis added). Further, the frequency variation signal is cyclic because

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 to Martin, et. al.
	counter 10 and its associated output would repeat after counter 10 reaches its maximum value and re-sets. The frequency variation signal, transmitted by D/A converter 12 to VCO 13, is internal to the circuit disclosed by Martin. *See* Figure. The frequency variation signal will vary within a range predetermined by the range of the signal that is output by VCO 13 (which is fed back to counter 10, which counts at a certain rate).
an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state; and	Martin discloses a voltage controlled oscillator (VCO) 13. VCO 13 produces an oscillating signal which has a frequency representative of the amplitude of the analog signal that VCO 13 receives from D/A converter 12. The analog signal VCO 13 receives from D/A converter 12, in turn, is determined by the digital signal from PROM 11, which is stepped or addressed at different rates depending on the rate at which counter 10 is counting. *See* '417 Patent at 2:39-50.  VCO 13 provides a maximum duty cycle signal which has a first state and a second state. This behavior is inherent in an oscillator used in a PWM DC/DC converter. Also, Figure 3 of the SMP211 datasheet shows a DC/DC converter with an oscillator with that varies within a frequency range according to a frequency variation signal and that also provides a maximum duty cycle with a first and second state.
a drive circuit that provides said drive signal when said maximum duty cycle signal is in said first state and a magnitude of said oscillation signal is below a variable threshold level.	It is inherent that pulse width modulator 14 provides a drive signal when the magnitude of the oscillator signal is below a variable threshold level and when the maximum duty cycle signal is in one of two states. For example, as described with respect to the SMP211 datasheet, Figure 3 shows the drive signal has a duty cycle that cannot be greater that the duty cycle of D_{MAX} from the oscillator. The D_{MAX} signal is fed into a NAND gate which will provide the signal to the gate driver only when the maximum duty cycle is in the first state. Moreover, Figure 3 shows a PWM comparator that compares the magnitude of the sawtooth signal out of the

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 to Martin, et. al.
	oscillator with the output of the error amplifier (the variable threshold). The output of this comparison is also coupled to an input of the NAND gate. The oscillation signal must be below the threshold level for the NAND gate to provide a signal to the gate driver. *See also* discussion at p. 2-49 of SMP211 Datasheet under "Pulse Width Modulator." 

b. **Claim 2**

Dependent claim 2 adds to Claim 1 the limitation that the device of Claim 1 is a monolithic device. As established above, the Martin patent anticipates Claim 1. Because Claim 2 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 2 are anticipated. One of ordinary skill in the art would have been motivated to combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention. As detailed in the table below, the Martin patent discloses each and every limitation of Claim 2 and, accordingly, anticipates Claim 2 under 35 U.S.C. § 102 (a) and (b).

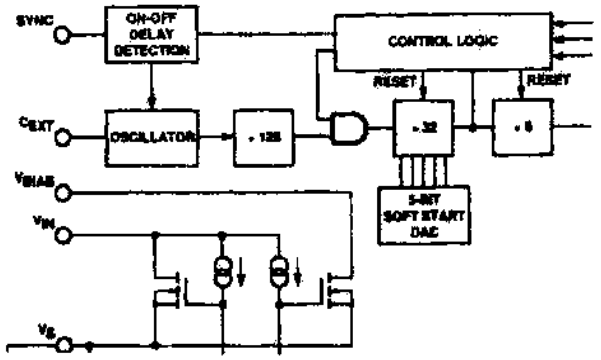
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 to Martin, et. al.
2. The pulse width modulated switch of claim 1 wherein said first terminal, said second terminal, said switch, said oscillator, said frequency variation circuit and said drive circuit comprise a monolithic device.	The circuit disclosed by Martin is a pulse width modulated (14) DC/DC converter (15) having a switch including a first terminal, a second terminal, an oscillator (VCO 13), and a frequency variation circuit (comprised of counter 10, in combination with EPROM 11, and digital to analog (D/A) converter 12). *See* Figure. One of ordinary skill in the art would have been motivated to

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,630,017 to Martin, et al.
	combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention. Indeed, the Examiner rejected claim 34 as initially filed (corresponding to this claim, except reciting "regulation circuit" instead of "pulse width modulated switch") as obvious under 35 U.S.C. § 103(a) for exactly this reason. *See* p. 5 of (non-final) Office Action of 12/13/1999 in Ex. B (file history of '851 patent). Power Integrations did not dispute the Examiner's objection, but instead amended then claim 29, the independent claim from which claim 34 depended, to include an oscillator. *See* Ex. B at pp. 6-7 of Amendment and Response dated 3/11/00.

c. **Claim 4**

Dependent Claim 4 adds to Claim 1 the limitation of a soft-start circuit. While Martin does not disclose a soft-start circuit, many prior art PWM devices use soft-start circuits. For example, the Keller article ("Off-line Power Integrated Circuit for International Rated 60-watt Power Supplies", by Richard A. Keller, a Power Integrations employee) **(Ref. CF)** discloses a pulse width modulated MOSFET switch with soft-start functionality. Accordingly, Claim 4 is rendered obvious under 35 U.S.C. § 103(a) by Keller in view of Martin.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,630,017 to Martin, et al. in view of Keller
4. The pulse width modulated switch of claim 1 further comprising a soft start circuit that provides a signal instructing said drive circuit to discontinue said drive signal when said magnitude of said oscillation signal is greater than a magnitude of said frequency variation signal.	While Martin does not disclose a soft-start circuit, it does disclose the use of a counter, a digital-to-analog converter (DAC), and a voltage controlled oscillator (VCO) to produce a frequency variation signal, as described above with respect to Claim 1. Similarly, Keller discloses the use of the same components- a counter, a digital-to-analog converter (DAC), and a voltage controlled oscillator (VCO)-- to produce a soft-start circuit.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 to Martin, et al.
	 A person of ordinary skill in the art, when considering Martin, would be motivated to combine the teachings of Martin with the teachings of Keller because they are both from the same field of endeavor--switching power supplies. Thus, one of ordinary skill in the art would be motivated to use common components to create a common signal for both frequency variation and soft start.

d. Claim 7

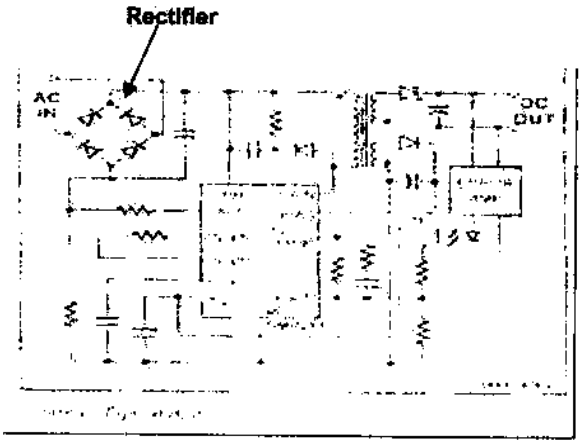
Dependent Claim 7 adds to Claim 1 the limitation that the frequency of the oscillation signal varies with the magnitude of the frequency variation signal. Because Claim 7 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 7 are anticipated. As detailed in the table below, the Martin patent discloses each and every limitation of Claim 7 and, accordingly, anticipates Claim 7 under 35 U.S.C. § 102 (a) and (b).

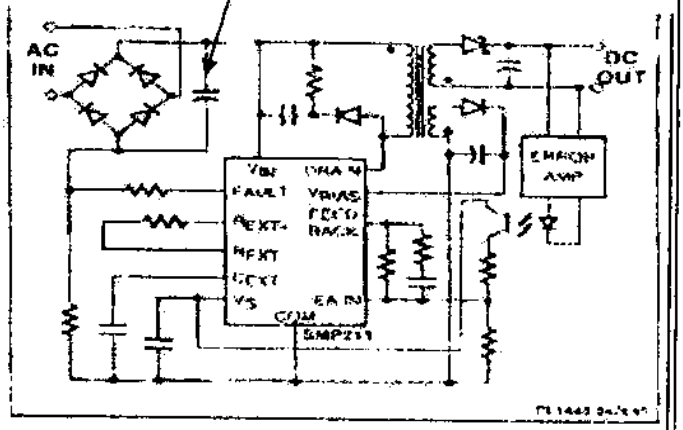
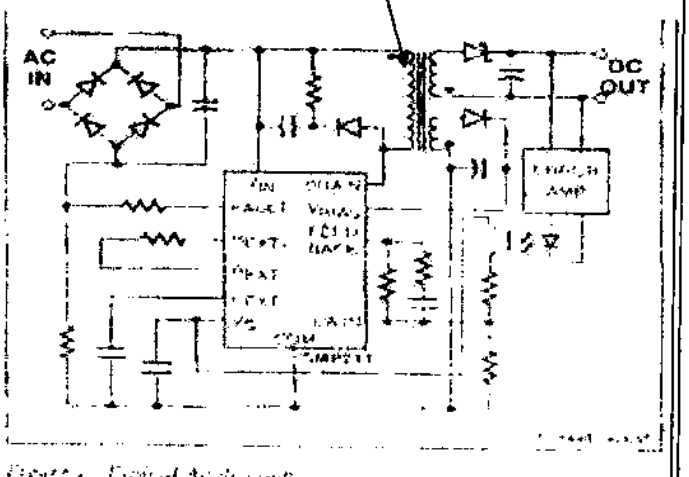
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 to Martin, et al.
7. The pulse width modulated switch of claim 1 wherein said frequency of said oscillation signal varies within said frequency range with a magnitude of said frequency variation signal.	Martin discloses a pulse width modulated switch, including voltage controlled oscillator (VCO) 13, having an oscillation signal which varies with the magnitude of the frequency variation signal applied to it. *See* 2:46-49.

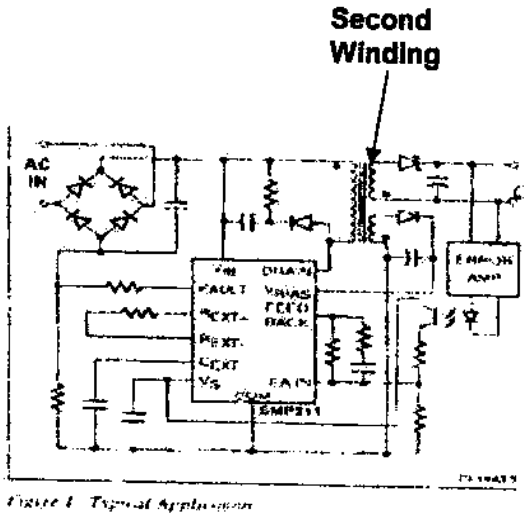
e. Claim 9

Dependent Claim 9 adds to Claim 1 the limitation of a rectifier comprising a rectifier input and a rectifier output, the rectifier input receiving an AC mains signal and the rectifier output providing a rectified signal. Because Claim 9 depends on Claim 1, all limitations of Claim 1

incorporated into Claim 9 are anticipated. As detailed in the table below, the Martin patent discloses each and every limitation of Claim 9 and, accordingly, anticipates Claim 9 under 35 U.S.C. § 102 (a) and (b).

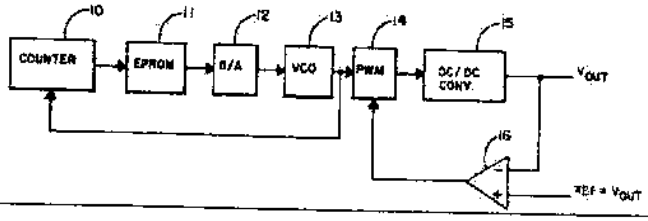
[illegible] U.S. Patent No. 6,107,851 [illegible]	[illegible] Anticipated or Rendered Obvious by Martin, U.S. Patent No. 6,107,851 [illegible]
9. The pulse width modulated switch of claim 1 further comprising;	One of ordinary skill in the art at the time of the invention would understand that the pulse width modulated switch disclosed by Martin could be configured as a flyback converter containing the limitations of claim 9. Thus, Martin, in view of the knowledge of one of ordinary skill in the art, anticipates claim 9 under 35 U.S.C. § 102(a). Alternatively, one of ordinary skill in the art would be motivated to combine Martin with the teachings of the SMP211 which configures a pulse width modulated switch as a flyback converter, containing each of the elements of claim 9. One of ordinary skill in the art would be motivated to combine Martin with the SMP211 because they are directed to the same field (regulation of power supplies), and the prior art Figure 1 of the patent shows using a frequency variation circuit to provide a frequency variation signal to the SMP211. One of ordinary skill would be motivated to replace the jitter circuit and current of Figure 1 with Martin. Accordingly, claim 9 is rendered obvious under 35 U.S.C. § 103(a) by Martin in combination with the SMP211.
a rectifier comprising a rectifier input and a rectifier output, said rectifier input receiving an AC mains signal and said rectifier output providing a rectified signal;	This element is inherently met by a pulse width modulated switch configured as a flyback converter. It is also shown in Figure 1 of the SMP211 datasheet. 

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,959,617 to Martin, et. al.
a power supply capacitor that receives said rectified signal and provides a substantially DC signal;	This element is inherently met by a pulse width modulated switch configured as a flyback converter. It is also shown in Figure 1 of the SMP211 datasheet. Capacitor  Figure 1. Typical Application
a first winding comprising a first terminal and a second terminal, said first winding receiving said substantially DC signal, said second terminal of said first winding coupled to said first terminal of said switch; and	This element is inherently met by a pulse width modulated switch configured as a flyback converter. It is also shown in Figure 1 of the SMP211 datasheet. First Winding 

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 to Martin, et. al.
a second winding magnetically coupled to said first winding.	This element is inherently met by a pulse width modulated switch configured as a flyback converter. It is also shown in Figure 1 of the SMP211 datasheet. 

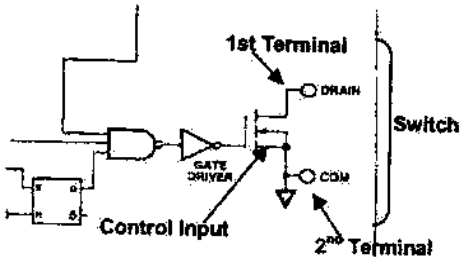
f. **Claim 10**

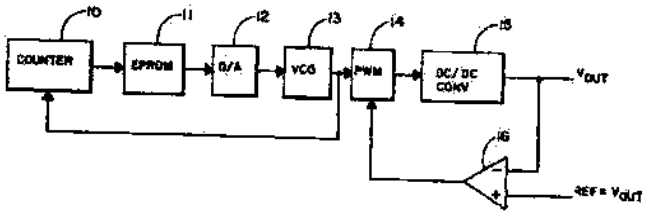
Dependent Claim 10 adds to Claim 1 the limitation that the variable threshold level is a function of a feedback signal received at a feedback terminal of the pulse width modulated switch. Because Claim 10 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 10 are anticipated. As detailed in the table below, the Martin patent discloses each and every limitation of Claim 10 and, accordingly, anticipates Claim 10 under 35 U.S.C. § 102 (a) and (b).

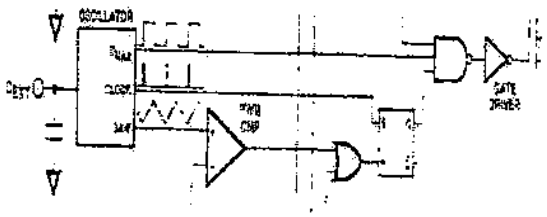
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 to Martin, et. al.
10. The pulse width modulated switch of claim 1 wherein said variable threshold level is a function of a feedback signal received at a feedback terminal of said pulse width modulated switch.	The variable threshold level is output by error amplifier 16, and is a function of a feedback signal received from V_{OUT}. It is applied to the PWM 14. 

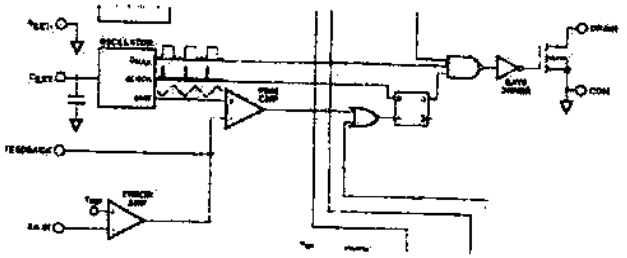
g. Claim 11

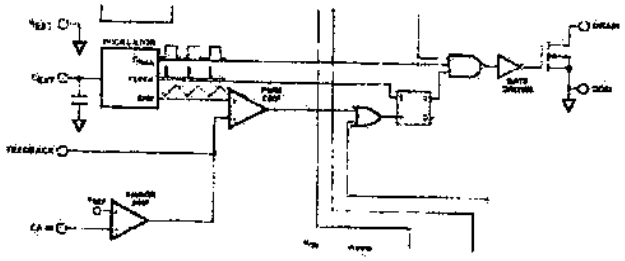
As established above, the Martin patent anticipates Claim 1. Because Claim 11 contains substantially the same limitations as Claim 1, all limitations of Claim 11 are anticipated for the reasons provided above. As detailed in the table below, the Martin patent discloses each and every limitation of Claim 11 and, accordingly, anticipates Claim 11 under 35 U.S.C. § 102 (a) and (b).

[illegible]	[illegible]
11. A regulation circuit comprising:	The Martin patent discloses a circuit for use with a switching mode power supply. '417 Patent, 1:49-53. The switch mode power supply (DC/DC converter 15 of Figure 1) inherently includes a switch. See also Wang and Sanders article entitled "Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters", published in October of 1993, referring to dc-dc converters as switching power supplies: "Programmed pulsewidth modulation techniques have been applied using various methods to control harmonics inherent in switched power circuits. In this paper, a method to generate an optimal programmed switching waveform for a dc-dc converter is presented." (Abstract, emphasis added). *See* p.596; *see also* p. 597 and Fig. 2 The operation of the switch contained in DC/DC converter 15 is pulse width modulated by pulse width modulator (PWM) 14. '417 Patent, 2:12-15. The SMP211 is an example of a switchmode power supply with a DC/DC converter. Figure 3 of the SMP211 datasheet shows a MOSFET switch. 
a first terminal;	The switch within DC/DC converter 15 inherently includes an input terminal. The switch of the SMP211 explicitly shows a 1st terminal. See diagram above.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,635,417 to Martin et al.
a second terminal;	The switch within DC/DC converter 15 inherently includes an output terminal. The switch of the SMP211 explicitly shows a 2nd terminal. See diagram above.
a feedback terminal coupled to disable the regulation circuit;	The terminal of PWM 14 which receives a signal output by comparator 16 acts as a feedback terminal coupled to disable the regulation circuit disclosed by Martin.
a switch comprising a control input, said switch allowing a signal to be transmitted between said first terminal and said second terminal according to a drive signal provided at said control input;	The gate terminal at the switch within DC/DC converter 15 comprises a control input. A signal is transmitted between the input terminal (first terminal) and output terminal (second terminal) according to the drive signal provided by pulse width modulator 14. The switch of the SMP211 explicitly shows a control input that allows a signal to be transmitted between the first and second terminals, and a drive signal provided to said input. See diagram above.
a frequency variation circuit that provides a frequency variation signal;	The counter 10, in combination with EPROM 11 and digital-to-analog (D/A) converter 12, constitute a frequency variation circuit, which provides an (analog) frequency variation signal applied to voltage controlled oscillator (VCO) 13.  "The output signal from the VCO 13 is also fed back to counter 10 which can be any suitable counter of any prescribed length." '417 patent, 2:20-22 (emphasis added). "The output of the counter 10 is connected to the input of EPROM 11 which can be any suitable kind of storage

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. [illegible] to Martin, et al.
	device.... The contents of the PROM 11 are stored in digital form. These digital signals are supplied to the digital-to-analog converter 12. The D/A converter 12 supplies an analog signal to the VCO 13." '417 patent, 2:20-22 2:22-36. "Thus, as the output signal produced by VCO 13 varies in frequency, the counter 10 is caused to count at different rates. With counter 10 counting at different rates the EPROM 11 is stepped or addressed at different rates. The content of the PROM are ... a pseudo random code in digital form. The digital signal from the PROM 11 is converted to an analog signal by D/A converter 12. This analog signal is then applied to VCO 13 which produces an oscillating signal which has a frequency which is representative of the amplitude of the analog signal." '417 patent, 2:20-22, 2:39-49 (emphasis added). Further, the frequency variation signal is cyclic because counter 10 and its associated output would repeat after counter 10 reaches its maximum value and re-sets. The frequency variation signal, transmitted by D/A converter 12 to VCO 13, is internal to the circuit disclosed by Martin. *See* Figure. The frequency variation signal will vary within a range predetermined by the range of the signal that is output by VCO 13 (which is fed back to counter 10, which counts at a certain rate).
an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state; and	Martin discloses a voltage controlled oscillator (VCO) 13. VCO 13 produces an oscillating signal which has a frequency representative of the amplitude of the analog signal that VCO 13 receives from D/A converter 12. The analog signal VCO 13 receives from D/A converter 12, in turn, is determined by the digital signal from PROM 11, which is stepped or addressed at different rates depending on the rate at which counter 10 is counting. *See* '417 Patent at 2:39-50. 

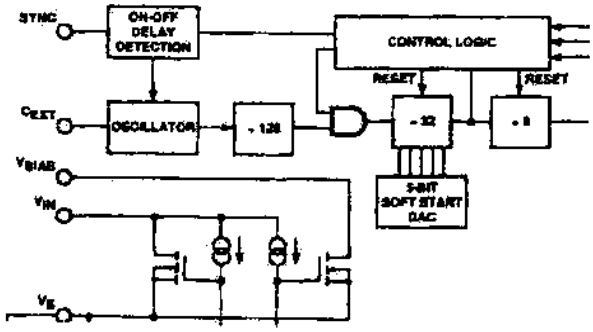
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,[illegible] to Martin, et al., [illegible]
	VCO 13 provides a maximum duty cycle signal which has a first state and a second state. This behavior is inherent in an oscillator used in a PWM DC/DC converter. Also, Figure 3 of the SMP211 datasheet shows a DC/DC converter with an oscillator with that varies within a frequency range according to a frequency variation signal and that also provides a maximum duty cycle with a first and second state. 
a drive circuit that provides said drive signal when said maximum duty cycle signal is in said first state and said regulation circuit is not disabled.	It is inherent that pulse width modulator 14 provides a drive signal when the regulation circuit is not disabled and when the maximum duty cycle signal is in said first state. For example, as described with respect to the SMP211 datasheet, Figure 3 shows the drive signal has a duty cycle that cannot be greater that the duty cycle of D_{MAX} from the oscillator. The D_{MAX} signal is fed into a NAND gate which will provide the signal to the gate driver only when the maximum duty cycle is in the first state. Moreover, Figure 3 shows a PWM comparator that compares the magnitude of the sawtooth signal out of the oscillator with the output of the error amplifier (the variable threshold). The output of this comparison is also coupled to an input of the NAND gate. The oscillation signal must be below the threshold level for the NAND gate to provide a signal to the gate driver. *See also* discussion at p. 2-49 of SMP211 Datasheet under "Pulse Width Modulator."

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,838,417 to Martin, et al.
	

b. Claim 13

Dependent Claim 13 depends from Claim 11, and adds the limitation of a soft start circuit. While Martin does not disclose a soft-start circuit, many prior art PWM devices use soft-start circuits. For example, the Keller article ("Off-line Power Integrated Circuit for International Rated 60-watt Power Supplies", by Richard A. Keller, a Power Integrations employee) discloses a pulse width modulated MOSFET switch with soft-start functionality. Accordingly, claim 13 is rendered obvious under 35 U.S.C. § 103(a) by Martin in view of Keller.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,838,417 to Martin, et al.
13. The regulation circuit of claim 11 further comprising a soft start circuit that provides a signal instructing said drive circuit to discontinue said drive signal according to a magnitude of said frequency variation signal.	While Martin does not disclose a soft-start circuit, it does disclose the use of a counter, a digital-to-analog converter (DAC), and a voltage controlled oscillator (VCO) to produce a frequency variation signal, as described above with respect to claim 1. Similarly, Keller discloses the use of the same components- a counter, a digital-to-analog converter (DAC), and a voltage controlled oscillator (VCO)-- to produce a soft-start circuit.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 to Martin, et. al. in view of Keller
	 A person of ordinary skill in the art, when considering Martin, would be motivated to combine the teachings of Martin with the teachings of Keller because they are both from the same field of endeavor--switching power supplies. One of ordinary skill would be motivated to use common components to create a common signal for both frequency variation and soft start.

i. **Claim 16**

As established above, the Martin patent anticipates Claim 11. As Claim 16 depends on Claim 11, it is established that all limitations of Claim 11 incorporated into Claim 16 are anticipated. Claim 16 adds the limitation that the device of Claim 11 is a monolithic device. One of ordinary skill in the art would have been motivated to combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention. As detailed in the table below, the Martin patent discloses each and every limitation of Claim 16 and, accordingly, anticipates Claim 16 under 35 U.S.C. § 102 (a) and (b).

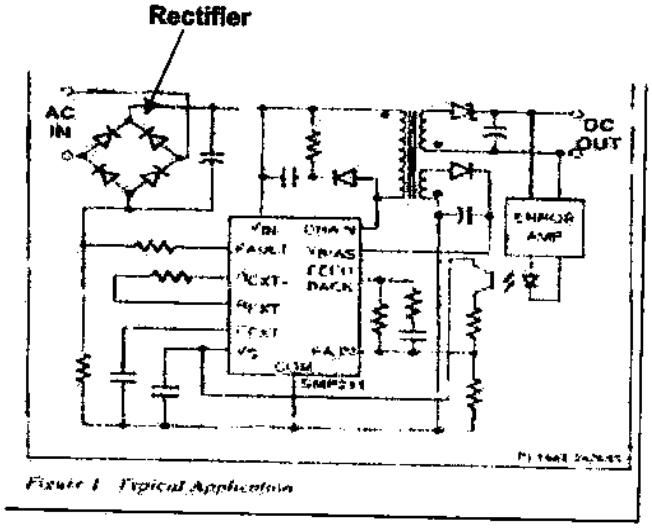
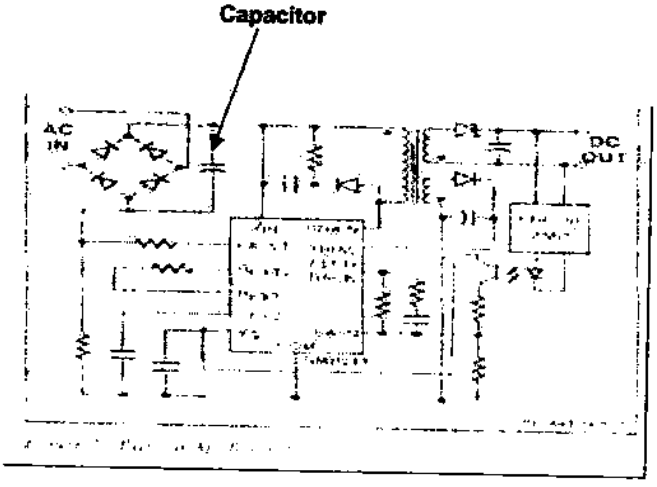
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 to Martin, et. al.
16. The regulation circuit of claim 11 wherein said first terminal, said second terminal, said switch, said frequency variation circuit, and said drive circuit comprise a monolithic	The circuit disclosed by Martin is a pulse width modulated (14) DC/DC converter (15) having a switch including a first terminal, a second terminal, an oscillator (VCO 13), and a frequency variation circuit (comprised

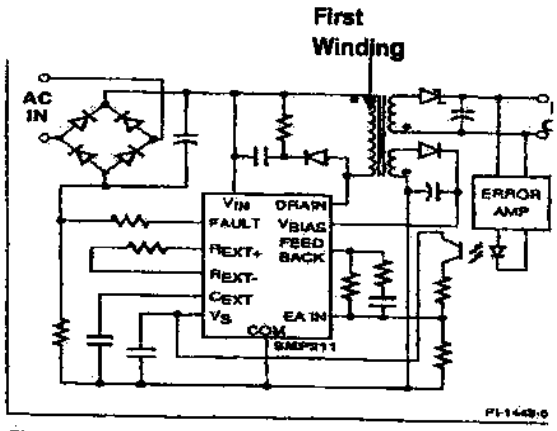
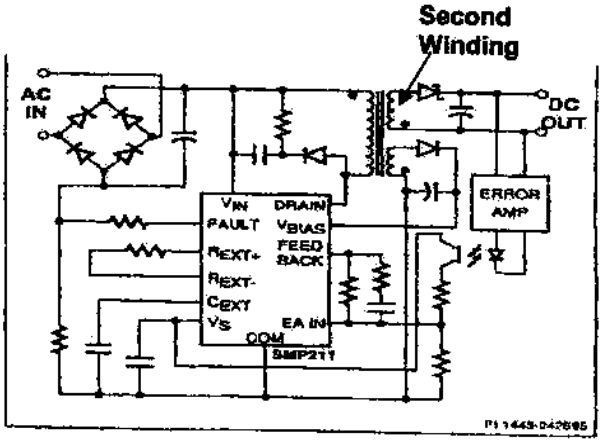
U.S. Patent No. [redacted]	Anticipated or Rendered Obvious by U.S. Patent No. [redacted]
device.	of counter 10, in combination with EPROM 11, and digital to analog (D/A) converter 12). *See* Figure. One of ordinary skill in the art would have been motivated to combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention. Indeed, the Examiner rejected claim 34 as initially filed (corresponding to this claim, except reciting "regulation circuit" instead of "pulse width modulated switch") as obvious under 35 U.S.C. § 103(a) for exactly this reason. *See* p. 5 of (non-final) Office Action of 12/13/1999 in Ex. B (file history of '851 patent). Power Integrations did not dispute the Examiner's objection, but instead amended then claim 29, the independent claim from which claim 34 depended, to include an oscillator. *See* Ex. B at pp. 6-7 of Amendment and Response dated 3/11/00.

j. **Claim 17**

As established above, the Martin patent anticipates Claim 11. As Claim 17 depends on Claim 11, it is established that all limitations of Claim 11 incorporated into Claim 17 are anticipated. As detailed in the table below, the Martin patent discloses each and every limitation of Claim 17 and, accordingly, anticipates Claim 17 under 35 U.S.C. § 102 (a) and (b).

[redacted]	[redacted]
17. The regulation circuit of claim 11 further comprising;	One of ordinary skill in the art at the time of the invention would understand that the pulse width modulated switch disclosed by Martin could be configured as a flyback converter containing the limitations of claim 9. Thus, Martin, in view of the knowledge of one of ordinary skill in the art, anticipates claim 9 under 35 U.S.C. § 102(a). Alternatively, one of ordinary skill in the art would be motivated to combine Martin with the teachings of the SMP211 which configures a pulse width modulated switch as a flyback converter, containing each of the elements of claim 9. One of ordinary skill in the art would be motivated to combine Martin with the SMP211 because they are directed to the same field (regulation of power supplies),

U.S. Patent No. [illegible]	Anticipated or Rendered Obvious by U.S. Patent No. [illegible]
	and the prior art Figure 1 of the patent shows using a frequency variation circuit to provide a frequency variation signal to the SMP211. One of ordinary skill would be motivated to replace the jitter circuit and current of Figure 1 with Martin. Accordingly, claim 9 is rendered obvious under 35 U.S.C. § 103(a) by Martin in combination with the SMP211.
a rectifier comprising a rectifier input and a rectifier output, said rectifier input receiving an AC mains signal and said rectifier output providing a rectified signal;	This element is inherently met by a pulse width modulated switch configured as a flyback converter. It is also shown in Figure 1 of the SMP211 datasheet. 
a power supply capacitor that receives said rectified signal and provides a substantially DC signal;	This element is inherently met by a pulse width modulated switch configured as a flyback converter. It is also shown in Figure 1 of the SMP211 datasheet. 
a first winding comprising a first terminal and	This element is inherently met by a pulse width

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by U.S. Patent No. 6,636,417 to Martin, et. al.
a second terminal, said first winding receiving said substantially DC signal, said second terminal of said first winding coupled to said first terminal of said switch; and	modulated switch configured as a flyback converter. It is also shown in Figure 1 of the SMP211 datasheet.  *Figure 1. Typical Application*
a second winding magnetically coupled to said first winding.	This element is inherently met by a pulse width modulated switch configured as a flyback converter. It is also shown in Figure 1 of the SMP211 datasheet.  *Figure 1. Typical Application*

D. WANG AND SANDERS ANTICIPATES VARIOUS CLAIMS OF THE '851 PATENT; IN COMBINATION WITH KELLER, IT RENDERS CLAIMS 4 AND 13 OBVIOUS

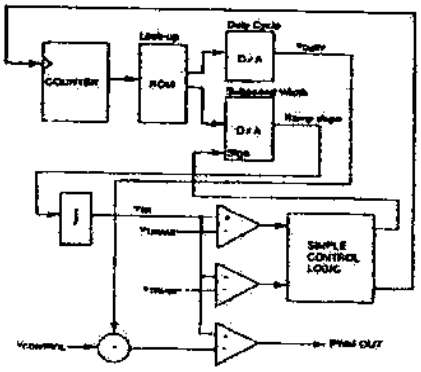
The Wang and Sanders article **(Ref. CD)** anticipates or renders obvious Claims 1, 2, 7, 9, 10, 11, 16, and 17 of the '851 patent. The Wang and Sanders article is prior art to the '851 patent under 35 U.S.C. § 102 (a) and (b).

This article describes the use of frequency variation via a digitally controlled analog waveform for EMI reduction in DC-DC power converters. Wang and Sanders alone anticipates all of the elements of Claim 1.

Wang and Sanders discloses a circuit for reducing the EMI of a power converter by varying the switching frequency of the device.:

> In this paper, a method to generate an optimal programmed switching waveform for a dc-dc converter is presented. This switching waveform is optimized to reduce the amplitude of harmonic peaks in the EMI generated by the converter.
>
> . . .
>
> The main approaches considered in this paper rely on the fact that it is possible to operate a PWM type power circuit with a time-varying switching frequency provided the average duty cycle is not disturbed. We employ a programmed waveform that repeats itself after K cycles. A typical programmed PWM waveform and its spectrum is illustrated in Fig. 1(b). Compared to regular PWM, the programmed PWM has a harmonic spacing that is smaller by a factor of K. The extra available harmonic frequencies are used to spread out the spectral energy of a given circuit waveform.

Ref. CD, p. 596.



Ref. CD, p. 604, figure 20.

Wang and Sanders contains each and every limitation of Claim 1 of the '851 patent. Figure 20 above illustrates an oscillator for generating a signal having a switching frequency ("V_{TR}") and having a control input ("Ramp slope") for varying the switching frequency. It shows a digital to analog converter ("D/A, subperiod width") coupled to the control input ("Ramp slope") for varying the switching frequency. And, it shows a counter (COUNTER) coupled to the output of the oscillator and (through the ROM element) to the digital to analog converter (D/A), the counter causing the digital to analog converter to adjust the control input and to vary the switching frequency. Wang describes the oscillator element (referred to as a waveform generator) in detail:

> A full implementation of the programmed waveform generator with a continuous control input can be based on a programmable triangle waveform generator. Two numbers are stored for every subperiod. One controls the slope of the triangle waveform, and therefore, the length of the subperiod. The other is added to the control signal, and therefore changes the duty ratio of a given subperiod from the average. The important waveforms and the resulting programmed PWM output are shown in Fig. 19. A block diagram implementation is shown in Fig. 20.

Ref. CD, p. 603-04.

Wang and Sanders discloses a single-ended forward converter (SEFC), which contains a switch that is pulse width modulated, as shown in Figure 2 below:

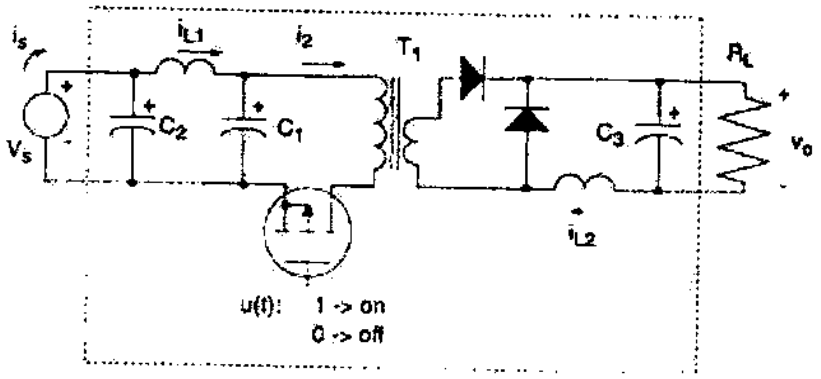
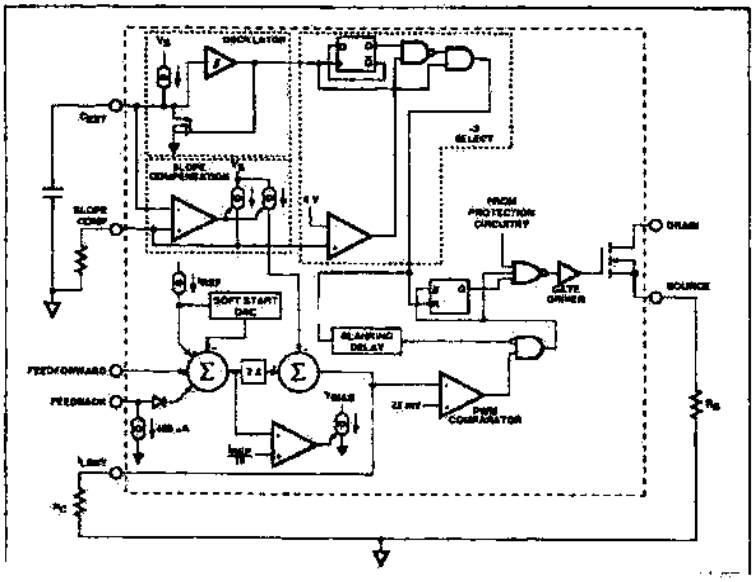


Fig. 2. Forward converter power path frequency, kHz

While Wang and Sanders does not disclose a soft-start circuit, it does disclose the use of a

counter, a digital-to-analog converter (DAC), and a voltage controlled oscillator (VCO) to produce a frequency variation signal, as described above.

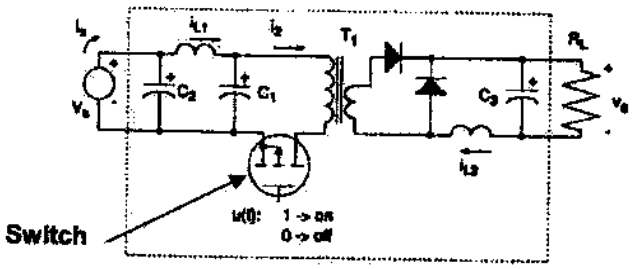
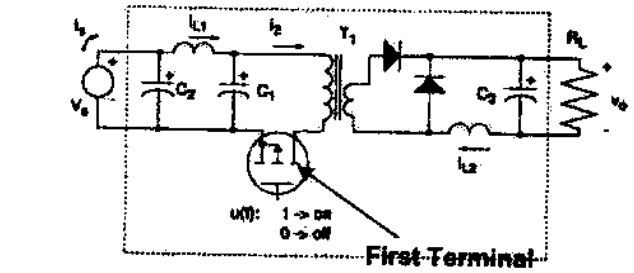
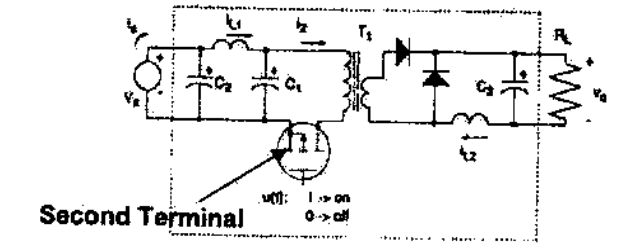
Keller, however, does disclose a soft-start circuit. In fact, it uses the same components that Wang and Sanders does- a counter, a digital-to-analog converter (DAC), and a voltage controlled oscillator (VCO)--, to yield a soft-start circuit. This feature is for use at start up: ("Soft Start: During power up the circuit has an optional soft-start function." p. 510) The soft start circuit is shown in Figure 1 (reproduced below) as "Soft Start DAC." Keller also discloses the use of a maximum duty cycle signal. ("Maximum Duty Cycle: The maximum duty cycle is user programmable." p. 508)

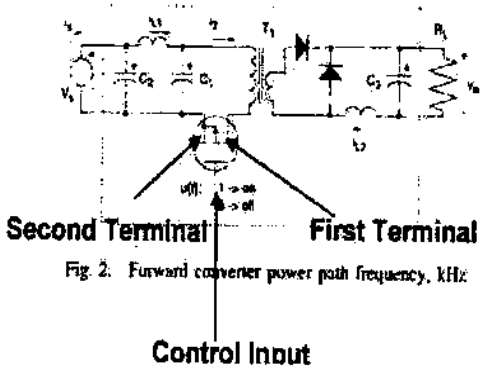
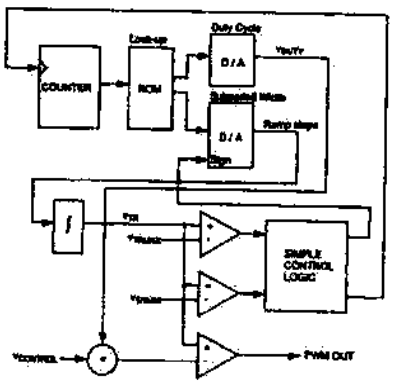


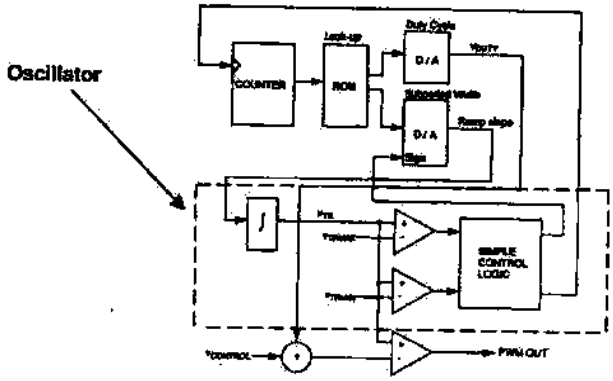
Both Wang and Sanders and Keller are addressed to the same field of art--switching power supplies--and thus one of ordinary skill in the art would be motivated to combine the two references so as to use the same components to generate the same input signal for both soft-start and frequency variation, as is recited in claims 4 and 13.

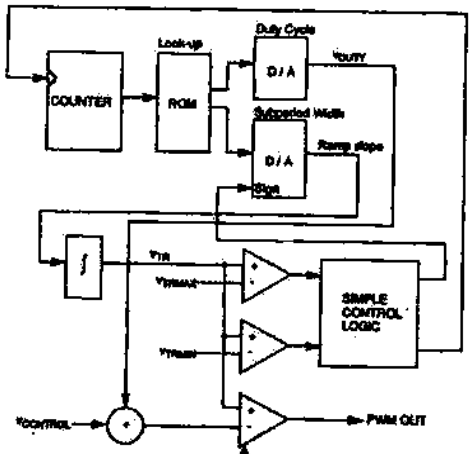
a. **Claim 1**

Claim 1 is an independent claim that is rendered obvious under 35 U.S.C. § 102 (a) and (b) by the Wang and Sanders article.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
1. A pulse width modulated switch comprising:	Wang and Sanders discloses a single-ended forward converter (SEFC), which contains a switch that is pulse width modulated. *See* discussion and Fig. 2 at p. 597.  Fig. 2. Forward converter power path frequency, kHz
a first terminal;	The switch of the dc-dc converter contains a first terminal.  Fig. 2. Forward converter power path frequency, kHz
a second terminal;	The switch of the dc-dc converter includes a second terminal.  Fig. 2. Forward converter power path frequency, kHz

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
a switch comprising a control input, said switch allowing a signal to be transmitted between said first terminal and said second terminal according to a drive signal provided at said control input;	The gate of the switch provides a control input that allows a signal to be transmitted between the input (first) terminal and the output (second) terminal according to a drive signal provided at the control input. The drive signal is provided by the signal marked as "PWM OUT" in Figure 20.  Fig. 2. Forward converter power path frequency, kHz
a frequency variation circuit that provides a frequency variation signal;	Wang and Sanders discloses a counter, a ROM, and a digital to analog (D/A) converter, which together act as a frequency variation circuit, which provides an (analog) frequency variation signal ("Ramp slope") applied to an oscillator. *See* Figure 20.  Fig. 20. Programmed PWM generator implementation with control input. Further, the frequency variation signal is cyclic because the counter and its associated output repeat cyclically as the counter reaches its maximum value and rolls over to zero. The frequency variation signal, transmitted by the D/A

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
	converter to the oscillator, is internal to the circuit disclosed by Wang and Sanders. *See* Figure 20. The frequency variation signal is used to modulate the frequency of the oscillation signal within a predetermined frequency range.
an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state; and	The oscillator is comprised of the signal integrator, the two comparators, and the control logic depicted in Figure 20. The oscillator disclosed by Wang and Sanders provides an oscillation signal having a frequency range; the frequency of the oscillation signal varies according to the frequency variation signal received by the oscillator from the D/A converter. See also p. 1 ("The main approaches considered in this paper rely on the fact that it is possible to operate a PWM type power circuit with a time-varying switching frequency.") As is known to those of ordinary skill in the art, an SEFC is known to require an interval for "core reset". *See, e.g.*, Severns and Bloom, "Modern DC-to-DC-Switchmode Power Converter Circuits" Section 5.3 (1985). Therefore, it is inherent in the SEFC taught by Wang and Sanders that there is a maximum duty cycle signal, D_{MAX}, comprising a first state and a second state, and a signal means that ensures that duty cycle D is less than D_{MAX}.  Fig. 20. Programmed PWM generator implementation with control input.
a drive circuit that provides said drive signal when said maximum duty cycle signal is in said first state and a magnitude of said oscillation signal is below a variable threshold	The drive circuit comprises the comparator which compares the combined values of $V_{CONTROL}$ and V_{DUTY} with the output of the PWM oscillator, V_{TR}.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
level.	 Fig. 20. Programmed PWM generator implementation with control input. Drive Circuit

b. Claim 2

Dependent claim 2 adds to Claim 1 the limitation that the device of Claim 1 is a monolithic device. As established above, the Wang and Sanders article anticipates Claim 1. Because Claim 2 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 2 are anticipated. One of ordinary skill in the art would have been motivated to combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention. As detailed in the table below, the Wang and Sanders article either anticipates Claim 2 under 35 U.S.C. § 102 (a) and (b), considering the knowledge of one of ordinary skill in the art at the time of the invention. Alternatively, Claim 2 is obvious in view of the Wang and Sanders article under 35 U.S.C. § 103(a).

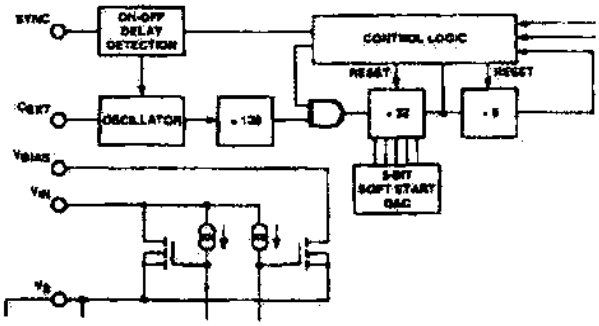
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
2. The pulse width modulated switch of claim 1 wherein said first terminal, said second terminal, said switch, said oscillator, said	The Wang and Sanders disclosure is not definitive as to whether the pulse width modulated circuitry, including the components claimed, was implemented by a monolithic device.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
frequency variation circuit and said drive circuit comprise a monolithic device.	However, it would have been obvious to one of ordinary skill in the art to combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention. Indeed, the Examiner rejected claim 34 as initially filed (corresponding to this claim, except reciting "regulation circuit" instead of "pulse width modulated switch") as obvious under 35 U.S.C. § 103(a) for exactly this reason. *See* p. 5 of (non-final) Office Action of 12/13/99 in the file history of the '851 patent. Power Integrations did not dispute the Examiner's objection, but instead amended then claim 29, the independent claim from which dependent claim 34 depended, to include an oscillator. *See* pp. 6-7 of Amendment and Response dated 3/11/00.

c. **Claim 4**

Dependent Claim 4 adds to Claim 1 the limitation of a soft-start circuit. While Wang and Sanders does not disclose a soft-start circuit, many prior art PWM devices use soft-start circuits. For example, the Keller article ("Off-line Power Integrated Circuit for International Rated 60-watt Power Supplies", by Richard A. Keller, a Power Integrations employee) discloses a pulse width modulated MOSFET switch with soft-start functionality. Accordingly, Claim 4 is rendered obvious under 35 U.S.C. § 103(a) by Wang and Sanders in view of Keller.

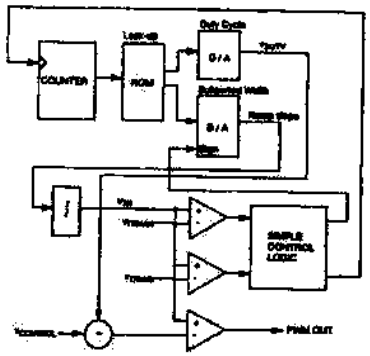
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders in view of Keller
4. The pulse width modulated switch of claim 1 further comprising a soft start circuit that provides a signal instructing said drive circuit to discontinue said drive signal when said magnitude of said oscillation signal is greater than a magnitude of said frequency variation signal.	While Wang and Sanders does not disclose a soft-start circuit, it does disclose the use of a counter, a digital-to-analog converter (DAC), and a voltage controlled oscillator (VCO) to produce a frequency variation signal, as described above with respect to claim 1. Similarly, Keller discloses the use of the same components--a counter, a digital-to-analog converter (DAC), and a voltage controlled oscillator (VCO)--to produce a soft-start circuit.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
	 One of ordinary skill in the art would be motivated to combine Keller with the teachings of Wang and Sanders because they are both from the same field of endeavor--switching power supplies. Thus, osne of ordinary skill in the art would be motivated to use the common components to generate the same signal for use in soft start and frequency generation.

d. Claim 7

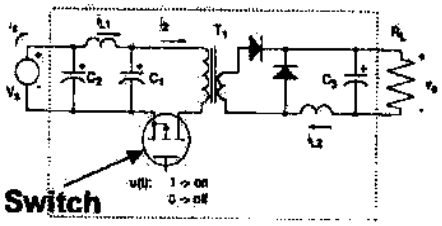
Dependent Claim 7 adds to Claim 1 the limitation that the frequency of the oscillation signal varies with the magnitude of the frequency variation signal. Because Claim 7 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 7 are anticipated. As detailed in the table below, the Wang and Sanders article discloses each and every limitation of Claim 7 and, accordingly, anticipates Claim 7 under 35 U.S.C. § 102 (a) and (b).

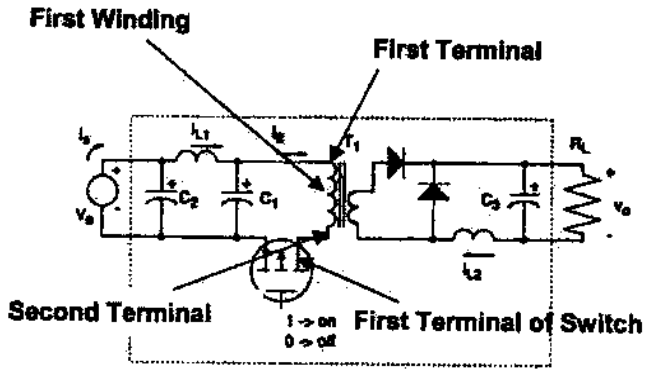
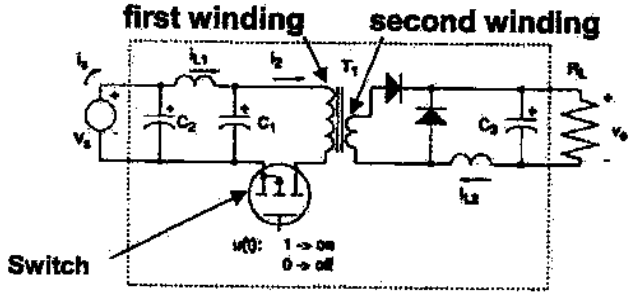
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
7. The pulse width modulated switch of claim 1 wherein said frequency of said oscillation signal varies within said frequency range with a magnitude of said frequency variation signal.	The oscillator disclosed by Wang and Sanders comprises the integrator, two comparators, and control logic depicted at Fig. 20. The oscillator supplies an oscillation signal having a frequency which varies with the magnitude of the frequency variation signal ("Ramp slope") applied to it by the D/A converter. *See* Fig. 20.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
	 Fig. 20. Programmed PWM generator implementation with control input.

e. **Claim 9**

Dependent Claim 9 adds to Claim 1 the limitation of a rectifier comprising a rectifier input and a rectifier output, the rectifier input receiving an AC mains signal and the rectifier output providing a rectified signal. Because Claim 9 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 9 are anticipated. As detailed in the table below, the Wang and Sanders article discloses each and every limitation of Claim 9 and, accordingly, anticipates Claim 9 under 35 U.S.C. § 102 (a) and (b)..

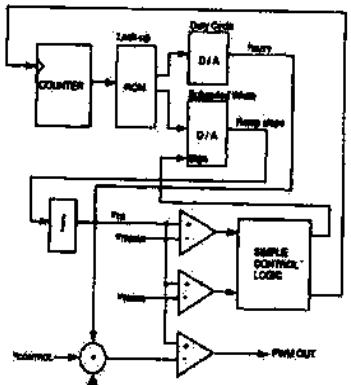
9. The pulse width modulated switch of claim 1 further comprising;	Wang and Sanders discloses a dc-dc forward converter, which contains a switch that is pulse-width modulated. *See* discussion and Fig. 2 at p. 597.  Fig. 2. Forward converter power path frequency, kHz
a rectifier comprising a rectifier input and a rectifier output, said rectifier input receiving	The field of endeavor of Wang is power supplies. So-called offline power supplies are the most common and

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
an AC mains signal and said rectifier output providing a rectified signal;	use an AC mains signal. As was known to one of ordinary skill in the art at the time of the invention, a rectifier is required to convert the incoming AC signal to a DC signal.
a power supply capacitor that receives said rectified signal and provides a substantially DC signal;	As was known to one of ordinary skill in the art at the time of the invention, an off-line power supply inherently includes a power supply capacitor to receive the rectified signal and provide a substantially DC signal.
a first winding comprising a first terminal and a second terminal, said first winding receiving said substantially DC signal, said second terminal of said first winding coupled to said first terminal of said switch; and	 Fig. 2. Forward converter power path frequency, kHz
a second winding magnetically coupled to said first winding.	 Fig. 2. Forward converter power path frequency, kHz

f. **Claim 10**

Dependent Claim 10 adds to Claim 1 the limitation that the variable threshold level is a function of a feedback signal received at a feedback terminal of the pulse width modulated switch. Because Claim 10 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 10 are anticipated. As detailed in the table below, the Wang and Sanders article discloses each and every

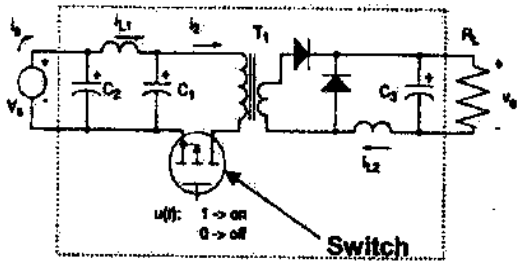
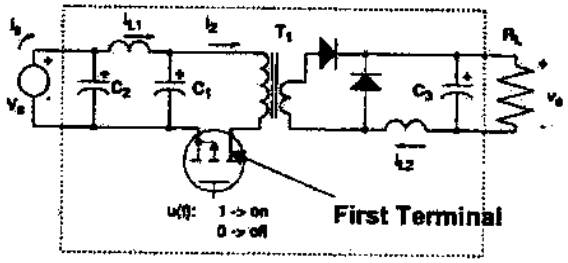
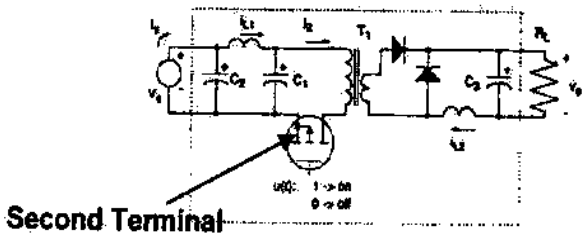
limitation of Claim 10 and, accordingly, anticipates Claim 10 under 35 U.S.C. § 102 (a) and (b).

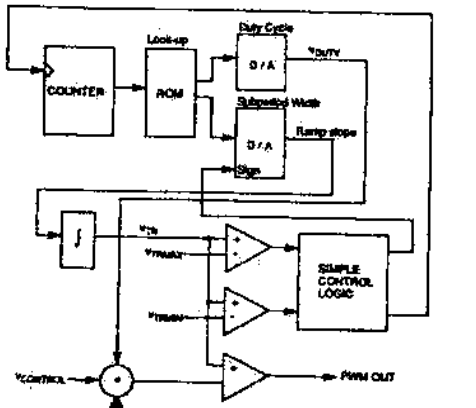
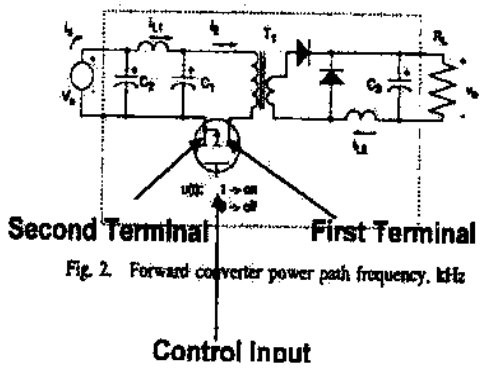
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
10. The pulse width modulated switch of claim 1 wherein said variable threshold level is a function of a feedback signal received at a feedback terminal of said pulse width modulated switch.	The variable threshold level is a function of a feedback signal received at feedback terminal $V_{CONTROL}$ of the pulse width modulated switch. *See* Figure 20 and discussion at pp. 603-604.  Fig. 20. Programmed PWM generator implementation with control input.

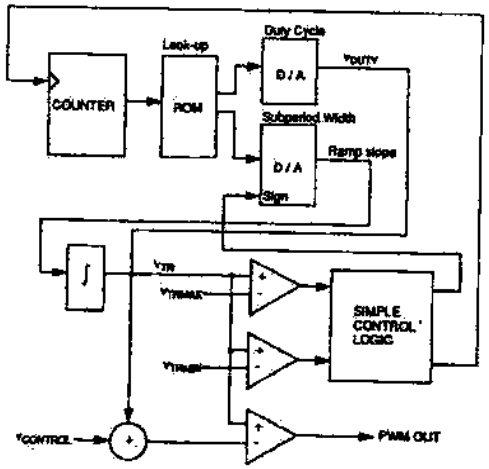
g. **Claim 11**

As established above, the Wang and Sanders article anticipates Claim 1. Because Claim 11 contains substantially the same limitations as Claim 1, all limitations of Claim 11 are anticipated for the reasons provided above. As detailed in the table below, the Wang and Sanders article discloses each and every limitation of Claim 11 and, accordingly, anticipates Claim 11 under 35 U.S.C. § 102 (a) and (b).

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
11. A regulation circuit comprising:	The gate of the switch provides a control input that allows a signal to be transmitted between the input (first) terminal and the output (second) terminal according to a drive signal provided at the control input. The drive signal is provided by the signal marked as "PWM OUT" in Figure 20.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
	 Fig. 2. Forward converter power path frequency, kHz
a first terminal;	The regulation circuit has a switch with a first (input) terminal.  Fig. 2. Forward converter power path frequency, kHz
a second terminal;	The regulation circuit has a switch with a second (output) terminal.  Fig. 2. Forward converter power path frequency, kHz
a feedback terminal coupled to disable the	Feedback terminal $V_{CONTROL}$ is coupled to disable the

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
regulation circuit;	regulation circuit.  Fig. 20. Programmed PWM generator implementation with control input
a switch comprising a control input, said switch allowing a signal to be transmitted between said first terminal and said second terminal according to a drive signal provided at said control input;	The gate of the switch provides a control input that allows a signal to be transmitted between the input (first) terminal and the output (second) terminal according to a drive signal provided at the control input. The drive signal is provided by the signal marked as "PWM OUT" in Figure 20.  Fig. 2. Forward converter power path frequency, kHz
a frequency variation circuit that provides a frequency variation signal;	Wang and Sanders discloses a counter, a ROM, and a digital to analog (D/A) converter, which together act as a frequency variation circuit, which provides an (analog) frequency variation signal ("Ramp slope") applied to an oscillator. See Figure 20.

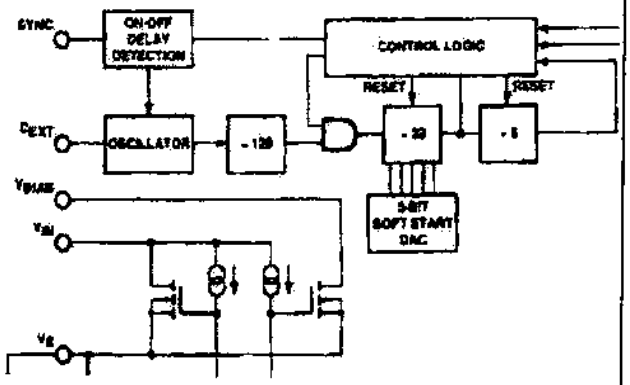
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
	 Fig. 20. Programmed PWM generator implementation with control input. Further, the frequency variation signal is cyclic because the counter and its associated output repeat cyclically as the counter reaches its maximum value and rolls over to zero. The frequency variation signal, transmitted by the D/A converter to the oscillator, is internal to the circuit disclosed by Wang and Sanders. See Figure 20. The frequency variation signal is used to modulate the frequency of the oscillation signal within a predetermined frequency range.
an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state; and	The oscillator is comprised of the signal integrator, the two comparators, and the control logic depicted in Figure 20. The oscillator disclosed by Wang and Sanders provides an oscillation signal having a frequency range; the frequency of the oscillation signal varies according to the frequency variation signal received by the oscillator from the D/A converter. See also p. 1 ("The main approaches considered in this paper rely on the fact that it is possible to operate a PWM type power circuit with a time-varying switching frequency.") As is known to those of ordinary skill in the art, an SEFC is known to require an interval for "core reset". See, e.g., Severns and Bloom, "Modern DC-to-DC-Switchmode Power Converter Circuits" Section 5.3 (1985).

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
	Therefore, it is inherent in the SEFC taught by Wang and Sanders that there is a maximum duty cycle signal, DMAX, comprising a first state and a second state, and a signal means that ensures that duty cycle D is less than DMAX.
a drive circuit that provides said drive signal when said maximum duty cycle signal is in said first state and said regulation circuit is not disabled.	The drive circuit comprises the comparator which compares the combined values of $V_{CONTROL}$ and V_{DUTY} with the output of the PWM oscillator, V_{TR}. It provides a drive signal when the maximum duty cycle is in a first state and the regulation circuit is not disabled.

h. Claim 13

Dependent Claim 13 depends from Claim 11, and adds the limitation of a soft start circuit. While Wang and Sanders does not disclose a soft-start circuit, many prior art PWM devices use soft-start circuits. For example, the Keller article ("Off-line Power Integrated Circuit for International Rated 60-watt Power Supplies", by Richard A. Keller, a Power Integrations employee) discloses a pulse width modulated MOSFET switch with soft-start functionality. Accordingly, claim 13 is rendered obvious under 35 U.S.C. § 103(a) by Keller in view of Wang and Sanders.

U.S. Patent No. 6,107,851	
13. The regulation circuit of claim 11 further comprising a soft start circuit that provides a signal instructing said drive circuit to discontinue said drive signal according to a magnitude of said frequency variation signal.	While Wang and Sanders does not disclose a soft-start circuit, it does disclose the use of a counter, a digital-to-analog converter (DAC), and a voltage controlled oscillator (VCO) to produce a frequency variation signal, as described above with respect to claim 11. Similarly, Keller discloses the use of the same components--a counter, a digital-to-analog converter (DAC), and a voltage controlled oscillator (VCO)--to produce a soft-start circuit.

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders in view of Keller
	 One of ordinary skill in the art would be motivated to combine Keller with the teachings of Wang and Sanders because they are both from the same field of endeavor--switching power supplies. Thus, one of ordinary skill in the art would, upon viewing Keller in view of Wang and Sanders, be motivated to use the signal input from the soft-start circuit for frequency variation as well.

i. **Claim 16**

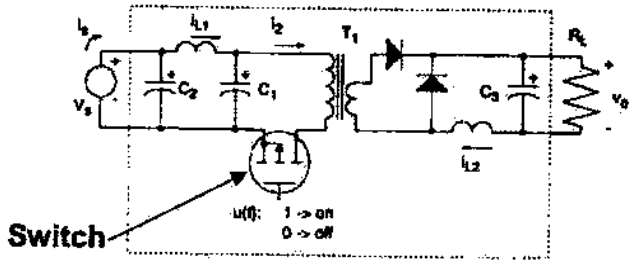
As established above, the Wang and Sanders article anticipates Claim 11. As Claim 16 depends on Claim 11, it is established that all limitations of Claim 11 incorporated into Claim 16 are anticipated. Claim 16 adds the limitation that the device of Claim 11 is a monolithic device. One of ordinary skill in the art would have been motivated to combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention. As detailed in the table below, the Wang and Sanders article either anticipates Claim 16 under 35 U.S.C. § 102 (a) and (b), considering the knowledge of one of ordinary skill in the art at the time of the invention. Alternatively, Claim 16 is obvious in view of the Wang and Sanders article under 35 U.S.C. § 103(a).

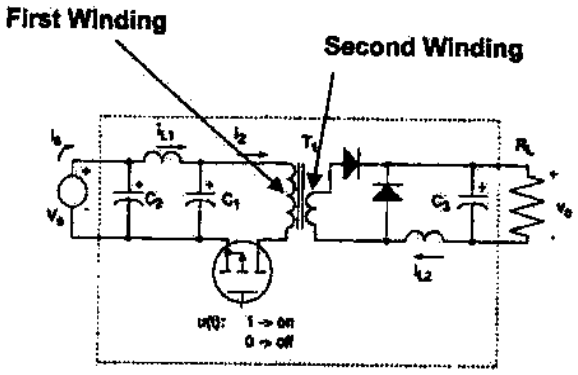
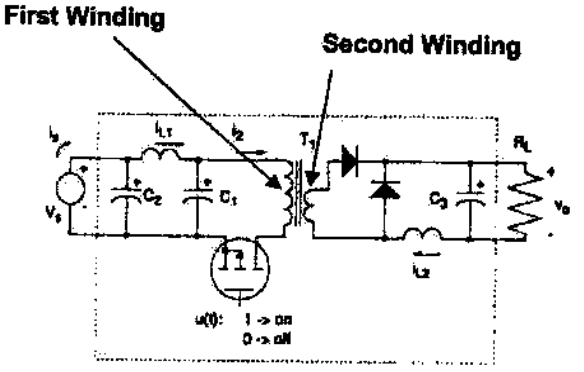
U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
16. The regulation circuit of claim 11 wherein said first terminal, said second terminal, said	The Wang and Sanders disclosure is not definitive as to whether the regulation circuit including the components

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
switch, said frequency variation circuit, and said drive circuit comprise a monolithic device.	claimed, was implemented by a monolithic device. However, it would have been obvious to one of ordinary skill in the art to combine all of the pulse width modulated switch circuitry with frequency variation circuitry into a single monolithic device, consistent with trends in the semiconductor industry at the time of the invention. Indeed, the Examiner rejected claim 34 as initially filed (corresponding to this claim, as obvious under 35 U.S.C. § 103(a) for exactly this reason. *See* p. 5 of (non-final) Office Action of 12/13/99 in the file history of the '851 patent. Power Integrations did not dispute the Examiner's objection, but instead amended then claim 29, the independent claim from which dependent claim 34 depended, to include an oscillator. *See* pp. 6-7 of Amendment and Response dated 3/11/00.

j. Claim 17

As established above, the Wang and Sanders article anticipates Claim 11. As Claim 17 depends on Claim 11, it is established that all limitations of Claim 11 incorporated into Claim 17 are anticipated. As detailed in the table below, the Wang and Sanders article discloses each and every limitation of Claim 17 and, accordingly, anticipates Claim 17 under 35 U.S.C. § 102 (a) and (b).

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by Wang and Sanders
17. The regulation circuit of claim 11 further comprising;	Wang discloses a dc-dc forward converter, which contains a regulation circuit. See discussion and Fig. 2 at p. 597. Wang meets each of the limitations of claim 11, as discussed above.  Fig. 2. Forward converter power path frequency, kHz

U.S. Patent No. 6,107,851	Anticipated or Rendered Obvious by [illegible]
a rectifier comprising a rectifier input and a rectifier output, said rectifier input receiving an AC mains signal and said rectifier output providing a rectified signal;	The field of endeavor of Wang is power supplies. So-called offline power supplies are the most common and use an AC mains signal. As was known to one of ordinary skill in the art at the time of the invention, a rectifier is required to convert the incoming AC signal to a DC signal.
a power supply capacitor that receives said rectified signal and provides a substantially DC signal;	As was known to one of ordinary skill in the art at the time of the invention, an off-line power supply inherently includes a power supply capacitor to receive the rectified signal and provide a substantially DC signal.
a first winding comprising a first terminal and a second terminal, said first winding receiving said substantially DC signal, said second terminal of said first winding coupled to said first terminal of said switch; and	Fig. 2 of Wang and Sanders meets this claim element.  Fig. 2. Forward converter power path frequency, kHz
a second winding magnetically coupled to said first winding.	Fig. 2 of Wang and Sanders discloses a second winding magnetically coupled to a first winding.  Fig. 2. Forward converter power path frequency, kHz

[illegible]	[illegible]

E. SZEPESI, ALONE OR IN COMBINATION WITH OTHER ART, INVALIDATES CLAIMS

Claims 1, 7, 9, 10, 11, and 17 are anticipated by the '995 patent, and the LM3101 datasheet that it references, under 35 U.S.C. §§ 102(a), 102(b). *See* MPEP 2131.01 (anticipation by multiple references)

1. Disclosure of the '995 Patent and the Related LM3101 Datasheet

The '995 patent to Szepesi et al. describes a pulse width modulated switch. "The present invention relates to isolated offline switching power supplies, and, more particularly, to a controller for use with such power supplies which provides short-circuit protection." *See* **Ref. AB** at 1:11-14. The '995 patent provides a reference design for a pulse width modulating switch utilizing the LM3101 secondary controller with an external MOSFET switch, similar to the PWM controller shown in Figure 1 of the '851 patent that is used in conjunction with switch 435.

The LM3101 controller includes a frequency shift circuit and an oscillator circuit. The switching frequency of the oscillator is reduced in response to output overload. *See* Abstract. The oscillator circuit 200 includes the oscillator 202 and the frequency shift circuitry 204. In particular, the frequency shift circuitry 204 reduces the frequency of the oscillator 202 in a smooth, continuous, quasi-linear fashion as the output approaches short circuit. *See* Ref. at Figure 6 and 7:23-25. The reduction to the frequency of the oscillator output V_{osc} reduces the frequency that the transistor 26 is switched on and off, and consequently, causes a reduction in the energy that is transferred through the transformer TR1. *See* **Ref. AB** at 7:10-22.

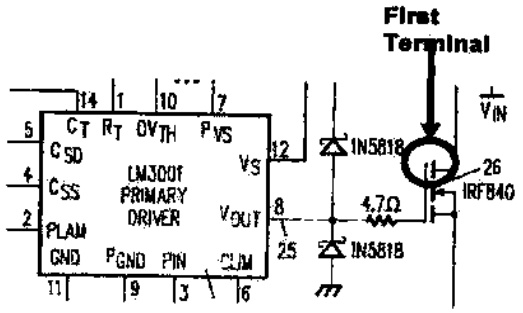
The '995 patent also describes circuitry for providing a maximum duty cycle signal from an oscillator. The D_{max} signal is created by a set-reset flip-flop toggled by the PWM oscillator, and output on the Q terminal of the flip-flop. The D_{max} signal enables an AND gate, through which the PWM signal drives the MOS power switch. *See* **Ref. AB** at Figure 5. This is the same structure described in Figures 3, 6, and 9 of the '851 patent.

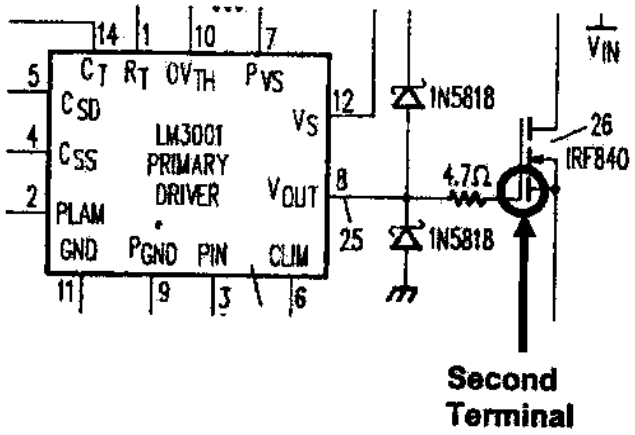
2. Szepesi Anticipates Claims 1, 7, 9, 10, 11, and 17

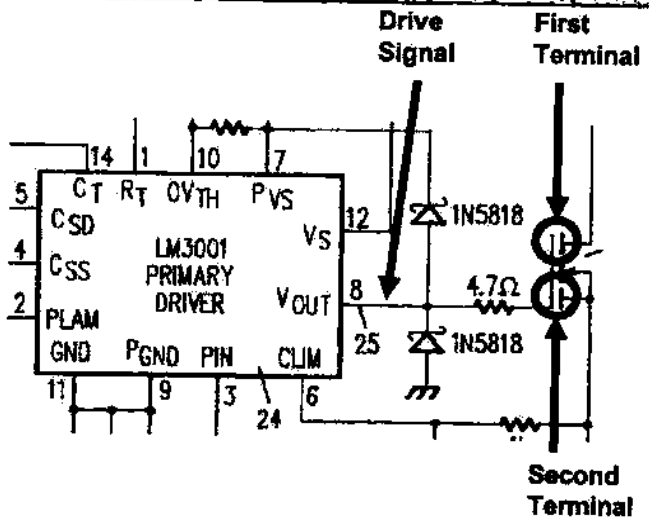
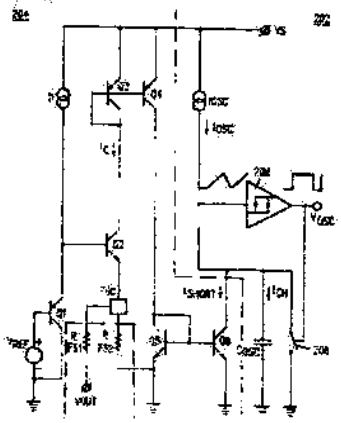
The '995 patent to Szepesi et al and the related LM3101 datasheet ("Szepesi") anticipate under 35 U.S.C. § 102(a) and (b) Claims 1, 7, 9, 10, 11, and 17 of the '851 patent. As detailed in the table below, Szepesi discloses each and every limitation of Claims 1, 7, 9, 10, 11, and 17.

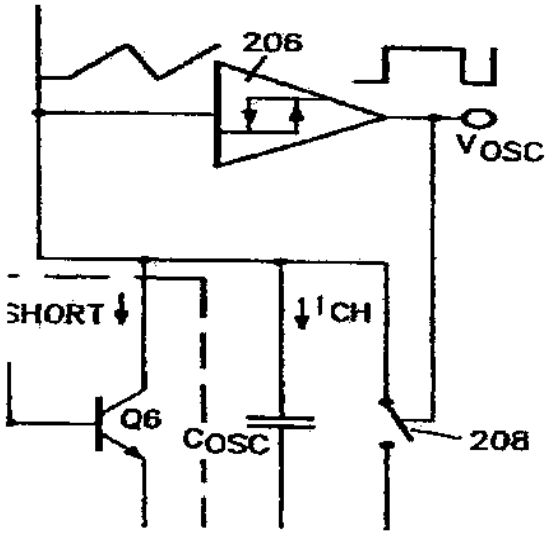
a. Claim 1

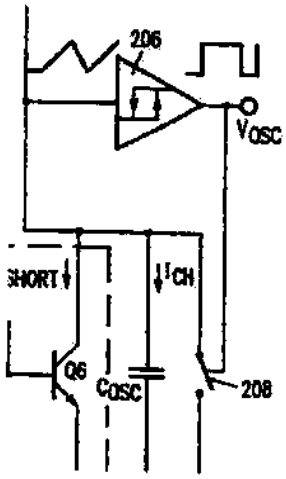
Claim 1 is an independent claim that the Szepesi references anticipate. As detailed in the table below, Szepesi discloses each and every limitation of Claim 1, anticipating Claim 1 under 35 U.S.C. § 102 (a) and (b).

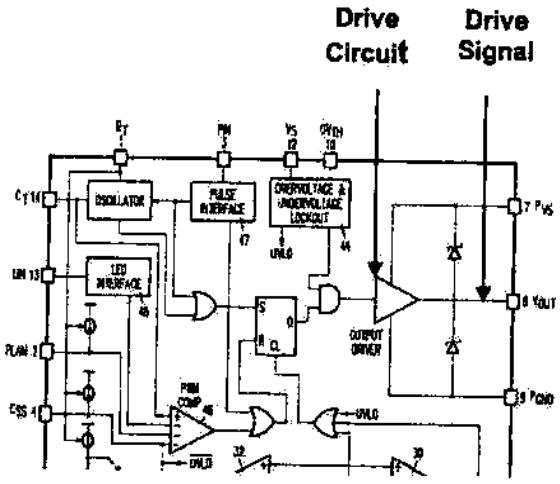
1. A pulse width modulated switch comprising:	U.S. Patent No. 5,498,995 (the "'995 Patent") describes a pulse width modulated switch. "The present invention relates to isolated offline switching power supplies, and, more particularly, to a controller for use with such power supplies which provides short-circuit protection." '995 Patent, 1:11-14. "A secondary controller 22 and a primary driver 24 form a 1MHz off-line Pulse Width Modulation (PWM) controller chip set with pulse communication for voltage-current-and charge-mode control." '995 Patent, 3:44-47.
a first terminal;	As shown in Figures 1 and 2, there is a first terminal of the MOSFET switch. 
a second terminal;	As shown in Figures 1 and 2, there is a second terminal of the MOSFET switch.

U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
	
a switch comprising a control input, said switch allowing a signal to be transmitted between said first terminal and said second terminal according to a drive signal provided at said control input;	As shown in Figure 2, there is a switch with a control input, the switch allowing a signal to be transmitted between the first terminal and the second terminal according to a drive signal provided at the control input. "The switching power supply is of the type having a transformer having primary and secondary windings for generating an output voltage at the secondary winding, a power switch for driving the primary winding, and controller circuitry for activating the power switch." '995 Patent, Abstract. "Powered initially with current (e.g. 200 μA) from Vin via a dropping resistor (not shown), its own oscillator and PWM generator driver the supply's MOSFET power switch 26, which drive the primary winding of transformer TR1." '995 Patent, 4:1-5.

U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
	
a frequency variation circuit that provides a frequency variation signal;	As shown in Figures 5 and 6, there is a frequency variation circuit that provides a frequency variation signal. "The oscillator generates PWM pulses having a predetermined frequency for use in activating the power switch. The frequency shift means gradually shifts the frequency of the PWM pulses at a shift rate in response to the output voltage decreasing to below a threshold level." '995 Patent, Abstract. "Frequency shift means is used gradually shifting the frequency of the PWM pulses at a shift rate in response to an output voltage of the switching power supply decreasing to below a threshold level, and programming means is used for programming the shift rate and the threshold level." '995 Patent, 2:58-62. "The frequency shift circuitry 204 reduces the frequency of the oscillator 202 in a smooth, continuous, quasi-linear fashion as the output approaches short circuit." '995 Patent, Fig. 6; 7:23-25; *see also* '995 Patent, 7:11-10:6. 

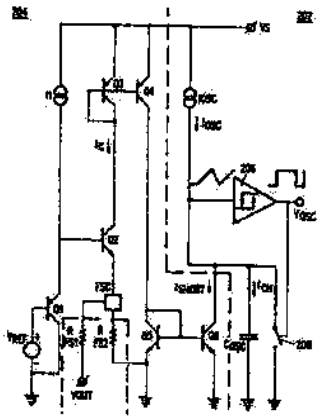
U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
	Further, the frequency variation signal is internal (supplied by block 204, a part of oscillator 200, which provides the ramp signal and time base for the PWM pulses that are sent back to the primary driver 24 via the transformer TR 2). *See* '995 Patent, Fig. 6 and 7:12-15.  The frequency variation signal is used to modulate the frequency of the oscillation signal within a range that is predetermined by the characteristics of resistors and capacitors within the frequency shift circuit. *See* LM3101 datasheet at p. 3-168.
an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state; and	D_{MAX} is provided by oscillator 200. Duty cycle is set by the ratio of charge to discharge current. See '995 Patent, 7:30-33. D_{MAX} is specified in the LM3101 datasheet as between 90% and 92%. See p. 3-162. As shown in Figures 1, 3, and 6, there is an oscillator that provides an oscillation signal having a frequency range, the frequency of the oscillation signal varying within said frequency range according to the frequency variation signal, the oscillator further providing a maximum duty cycle signal comprising a first state and a second state. "FIG. 6 illustrates the oscillator circuit 200. The oscillator circuit 200 includes an oscillator 202 and frequency shift circuitry 204. The oscillator 202 output V_{osc} provides the ramp signal and time base for the PWM pulses that are sent back to the primary driver

U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
	24 via the transformer TR2. The purpose of the frequency shift circuitry 204 is to reduce, or 'shift' the frequency of the oscillator output V_{osc} when the output V_{osc} is short-circuited or approaching near short-circuit conditions. The reduction to the frequency of the oscillator output V_{osc} ultimately results in a reduction in the frequency that the transistor 26 is switched on and off, and, consequently, a reduction in the energy that is transferred through the transformer TR1." '995 Patent, 7:10-22; *see also* '995 Patent, 7:11-10:6. 
a drive circuit that provides said drive signal when said maximum duty cycle signal is in said first state and a magnitude of said oscillation signal is below a variable threshold level.	D_{MAX} is provided by oscillator 200 (Figure 5) in one of its two states. Duty cycle is set by the ratio of charge to discharge current. '995 Patent, 7:32-33. D_{MAX} is specified in the LM3101 datasheet as 90%-92%. *See* LM3101 datasheet at p. 3-162. As shown in Figures 1, 3, and 5, there is a drive circuit that provides the drive signal when the maximum duty cycle signal is in the first state and a magnitude of said oscillation signal is below a variable threshold level. As shown in Figure 3 below, V_{out} is connected to the control input of the switch to drive the switch.

U.S. Patent No. 6,107,881	Anticipated by '995 Patent and Related Documents
	 "When input power (Vin) is applied to the primary-side controller/driver 24 it acts like a conventional controller at startup and gets the circuit running. Powered initially with current (e.g. 200 µA) from Vin via a dropping resistor (not shown), its own oscillator and PWM generator driver the supply's MOSFET power switch 26, which drive the primary winding of transformer TR1." '995 Patent, 3:66-4:5. "The secondary-side controller 22 effectively takes control of the supply and primary-side driver 24 becomes its slave. The slave's driver output 25 turns the power FET 26 on and off, only in response to PWM pulses from the secondary-side controller 22." '995 Patent, 4:17-21; *see also* '995 Patent, 4:21-5:17.

b. Claim 7

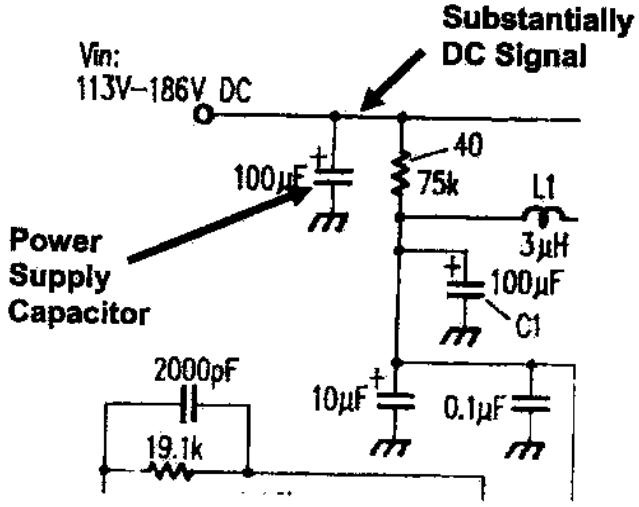
Dependent Claim 7 adds to Claim 1 the limitation that the frequency of the oscillation signal varies with the magnitude of the frequency variation signal. Because Claim 7 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 7 are anticipated. As detailed in the table below, the Szepesi references disclose each and every limitation of Claim 7 and, accordingly, anticipate Claim 7 under 35 U.S.C. § 102 (a) and (b).

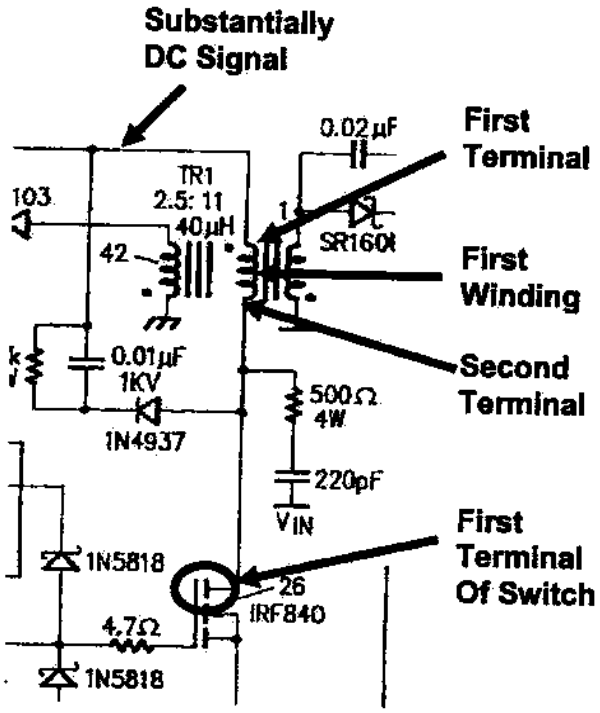
U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
7. The pulse width modulated switch of claim 1 wherein said frequency of said oscillation signal varies within said frequency range with a magnitude of said frequency variation signal.	The frequency of the oscillation signal varies within the frequency range with a magnitude of the frequency variation signal. "FIG. 6 illustrates the oscillator circuit 200. The oscillator circuit 200 includes an oscillator 202 and frequency shift circuitry 204. The oscillator 202 output V_{osc} provides the ramp signal and time base for the PWM pulses that are sent back to the primary driver 24 via the transformer TR2." '995 Patent 7:10-14.  "The purpose of the frequency shift circuitry 204 is to reduce, or 'shift' the frequency of the oscillator output V_{osc} when the output V_{osc} is short-circuited or approaching near short-circuit conditions. The reduction to the frequency of the oscillator output V_{osc} ultimately results in a reduction in the frequency that the transistor 26 is switched on and off, and, consequently, a reduction in the energy that is transferred through the transformer TR1." '995 Patent, 7:14-22; *see also* '995 Patent, 7:11-10:6. "Frequency shift means is used gradually shifting the frequency of the PWM pulses at a shift rate in response to an output voltage of the switching power supply decreasing to below a threshold level, and programming means is used for programming the shift rate and the threshold level." '995 Patent, 2:58-62. "The frequency shift circuitry 204 reduces the frequency of the oscillator 202 in a smooth, continuous, quasi-linear fashion as the output approaches short circuit." '995 Patent, 7:23-25; *see also* '995 Patent, 7:11-10:6.

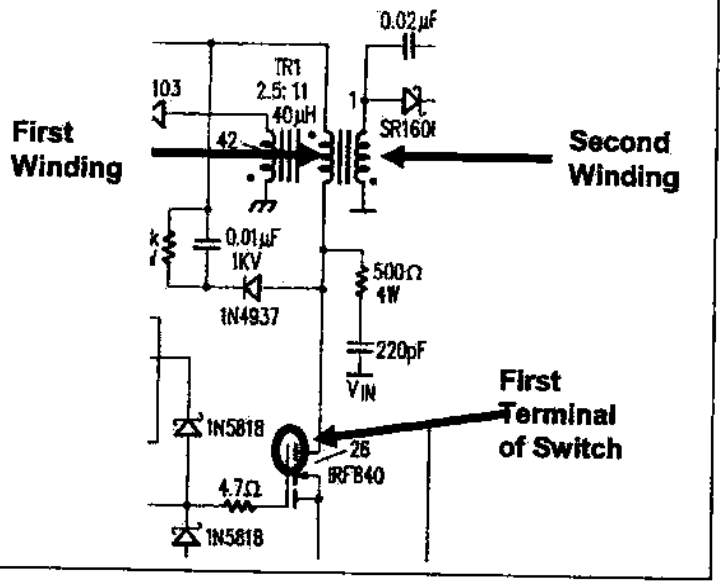
c. **Claim 9**

Dependent claim 9 adds to Claim 1 the limitation of a rectifier comprising a rectifier input and a rectifier output, the rectifier input receiving an AC mains signal and the rectifier output providing a

rectified signal. Because Claim 9 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 9 are anticipated. One of ordinary skill in the art would be motivated to provide a rectifier in order to generate DC signal V_{in} in Figure 2 of the '995 patent. As detailed in the table below, the Szepesi references disclose each and every limitation of Claim 9 and, accordingly, anticipate Claim 9 under 35 U.S.C. § 102 (a) and (b).

U.S. Patent No. 6,107,851	
9. The pulse width modulated switch of claim 1 further comprising;	
a rectifier comprising a rectifier input and a rectifier output, said rectifier input receiving an AC mains signal and said rectifier output providing a rectified signal;	The invention of the '995 patent relates to isolated offline switching power supplies, and more particularly, to a controller for use with such power supplies which provides short-circuit protection. '995 patent at 1:10-13. In this context, "offline" means operated off of the power lines which precisely meets this claim element.
a power supply capacitor that receives said rectified signal and provides a substantially DC signal;	As shown in Figure 2, there is a power supply capacitor that receives said rectified signal and provides a substantially DC signal. 

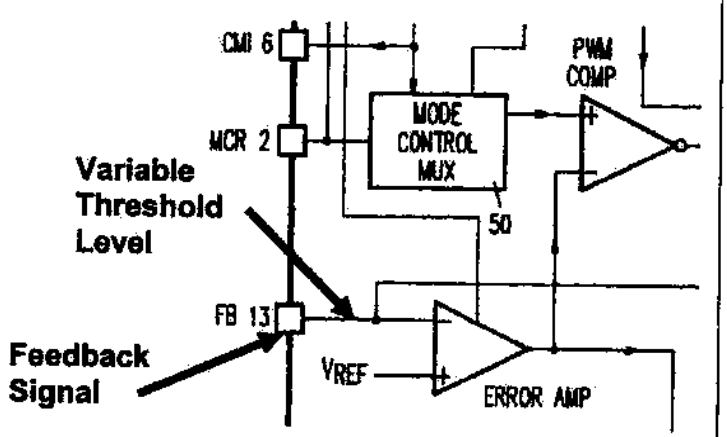
U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documentation
a first winding comprising a first terminal and a second terminal, said first winding receiving said substantially DC signal, said second terminal of said first winding coupled to said first terminal of said switch; and	As shown in Figure 2, there is a first winding comprising a first terminal and a second terminal, the first winding receiving the substantially DC signal, the second terminal of the first winding coupled to said first terminal of said switch. 
a second winding magnetically coupled to said first winding.	As shown in Figure 2, there is a second winding magnetically coupled to said first winding.

U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
	

d. Claim 10

Dependent claim 10 adds to claim 1 the limitation that the variable threshold level is a function of a feedback signal received at a feedback terminal of the pulse width modulated switch. Because Claim 10 depends on Claim 1, all limitations of Claim 1 incorporated into Claim 10 are anticipated. As detailed in the table below, the Szepesi references disclose each and every limitation of Claim 10 and, accordingly, anticipate Claim 10 under 35 U.S.C. § 102 (a) and (b).

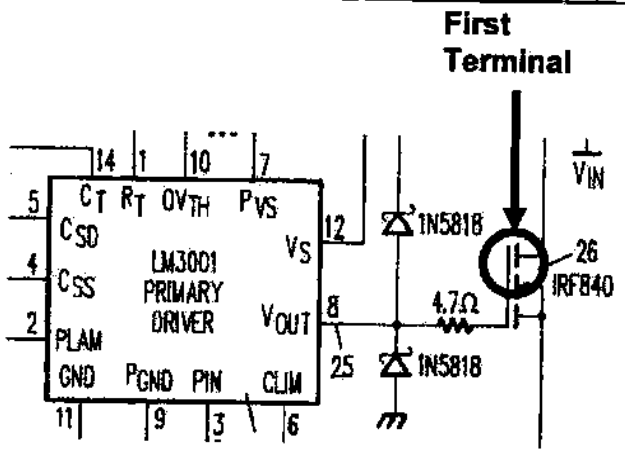
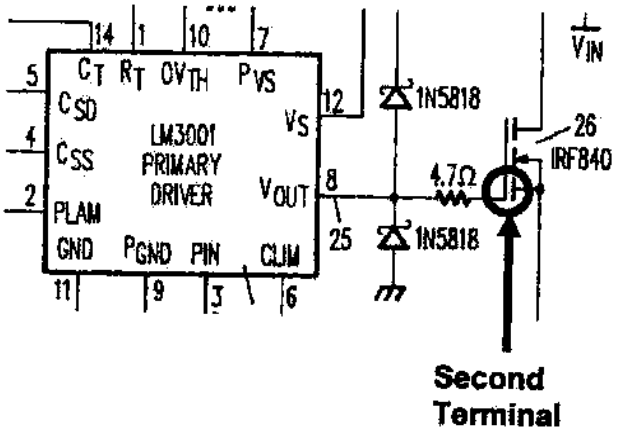
U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
10. The pulse width modulated switch of claim 1 wherein said variable threshold level is a function of a feedback signal received at a feedback terminal of said pulse width modulated switch.	As shown in Figures 2 and 5, the variable threshold level is a function of a feedback signal received at a feedback terminal, FB, of the pulse width modulated switch.

U.S. Patent No. 6,107,851	Anticipated by 1995 Patent and Related Documents
	

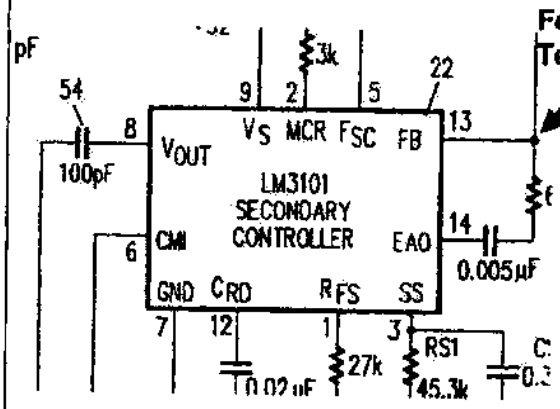
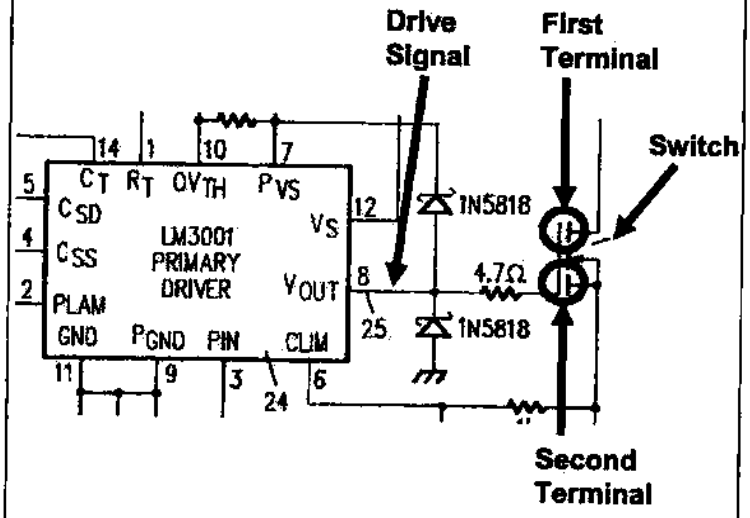
e. **Claim 11**

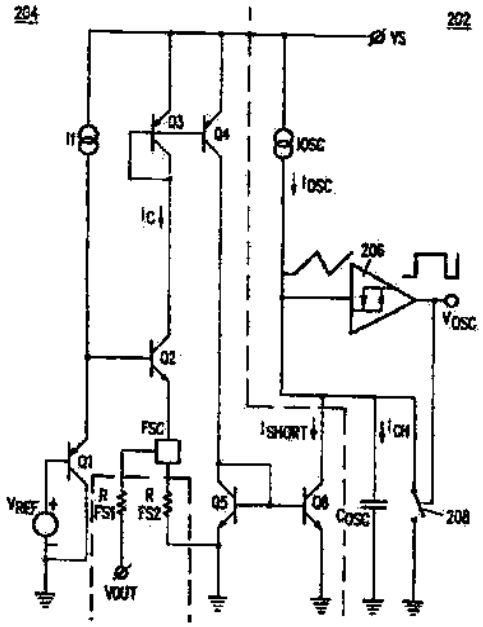
As established above, the Szepesi references anticipate Claim 1. Because Claim 11 contains substantially the same limitations as Claim 1, all limitations of Claim 11 are anticipated for the reasons provided above. As detailed in the table below, the Szepesi references disclose each and every limitation of Claim 11 and, accordingly, anticipate Claim 11 under 35 U.S.C. § 102 (a) and (b).

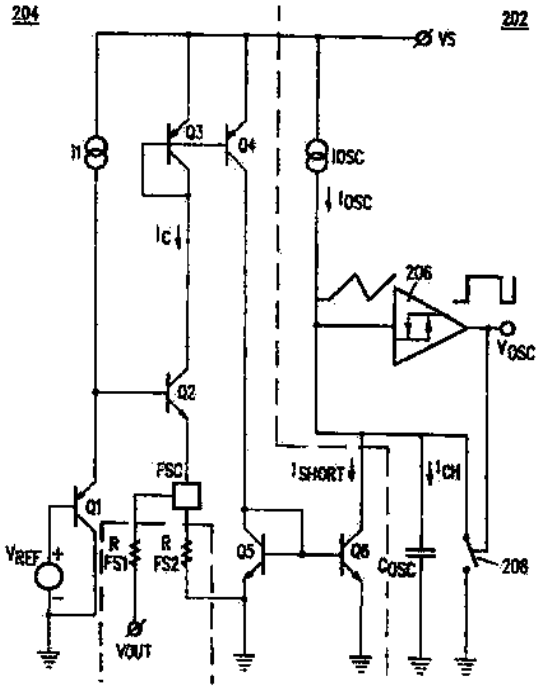
U.S. Patent No. 6,107,851	
11. A regulation circuit comprising:	The '995 Patent describes a regulation circuit. "The present invention relates to isolated offline switching power supplies, and, more particularly, to a controller for use with such power supplies which provides short-circuit protection." '995 Patent, 1:11-14. "A secondary controller 22 and a primary driver 24 form a 1MHz off-line Pulse Width Modulation (PWM) controller chip set with pulse communication for voltage-current-and charge-mode control." '995 Patent, 3:44-47.
a first terminal;	As shown in Figures 1 and 2, there is a first terminal, the MOSFET drain terminal, of the regulation circuit.

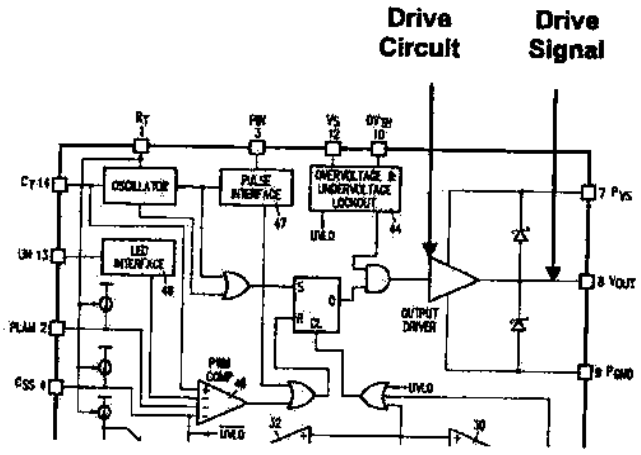
U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
	
a second terminal;	As shown in Figures 1 and 2, there is a second terminal, the MOSFET source terminal of the regulation circuit. 

U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
a feedback terminal coupled to disable the regulation circuit;	As shown in Figures 2 and 5, there is a feedback terminal coupled to disable the regulation circuit.

U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
	
a switch comprising a control input, said switch allowing a signal to be transmitted between said first terminal and said second terminal according to a drive signal provided at said control input;	 As shown in Figure 2, there is a switch with a control input, the switch allowing a signal to be transmitted between the first terminal and the second terminal according to a drive signal provided at the control input. "The switching power supply is of the type having a transformer having primary and secondary windings for generating an output voltage at the secondary winding, a power switch for driving the primary winding, and controller circuitry for activating the power switch." '995 Patent, Abstract. "Powered initially with current (e.g. 200 µA) from Vin via a dropping resistor (not shown), its own oscillator and PWM generator driver the supply's MOSFET power switch 26, which drive the primary winding of transformer TR1." '995 Patent, 4:1-5.
a frequency variation circuit that provides a	As shown in Figure 6, there is a frequency variation

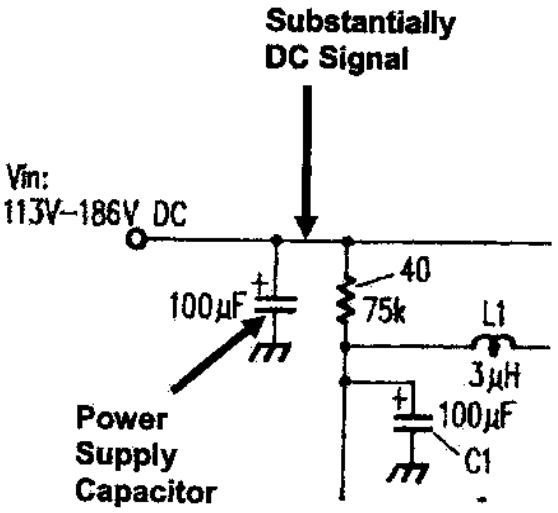
U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
frequency variation signal;	circuit that provides a frequency variation signal. "The oscillator generates PWM pulses having a predetermined frequency for use in activating the power switch. The frequency shift means gradually shifts the frequency of the PWM pulses at a shift rate in response to the output voltage decreasing to below a threshold level." '995 Patent, Abstract.  "Frequency shift means is used gradually shifting the frequency of the PWM pulses at a shift rate in response to an output voltage of the switching power supply decreasing to below a threshold level, and programming means is used for programming the shift rate and the threshold level." '995 Patent, 2:58-62. "The frequency shift circuitry 204 reduces the frequency of the oscillator 202 in a smooth, continuous, quasi-linear fashion as the output approaches short circuit." '995 Patent, 7:23-25; *see also* '995 Patent, 7:11-10:6. Further, under the Court's construction, the frequency variation signal is internal (supplied by block 204, within oscillator block 200), which provides the ramp signal and time base for the PWM pulses that are sent back to the primary driver 24 via the transformer TR 2). *See* '995 Patent, Fig. 6 and 7:12-15. The frequency variation signal is used to modulate the frequency of the oscillation signal within a range that is predetermined by the characteristics of resistors and

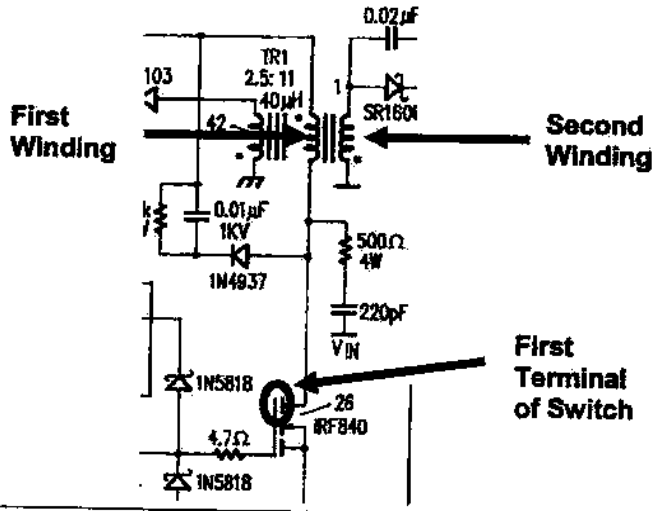
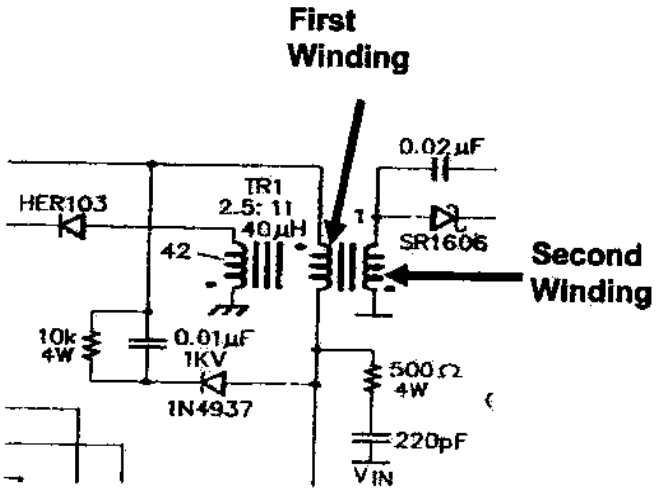
U.S. Patent No. 6,107,[illegible]	Anticipated by '995 Patent and Related Documents
	capacitors within the frequency shift circuit. *See* LM3101 datasheet at p. 3-168.
an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state; and	D_{MAX} is provided by oscillator 200 (Figure 5) in one of its two states. Duty cycle is set by the ratio of charge to discharge current. '995 Patent, 7:32-33. D_{MAX} is specified in the LM3101 datasheet as 90%-92%. See LM3101 datasheet at p. 3-162. As shown in Figures 1, 3, and 6, there is an oscillator that provides an oscillation signal having a frequency range, the frequency of the oscillation signal varying within said frequency range according to the frequency variation signal, the oscillator further providing a maximum duty cycle signal comprising a first state and a second state. "FIG. 6 illustrates the oscillator circuit 200. The oscillator circuit 200 includes an oscillator 202 and frequency shift circuitry 204.  The oscillator 202 output V_{OSC} provides the ramp signal and time base for the PWM pulses that are sent back to the primary driver 24 via the transformer TR2. The purpose of the frequency shift circuitry 204 is to reduce, or 'shift' the frequency of the oscillator output V_{OSC} when the output V_{OSC} is short-circuited or approaching near short-circuit conditions. The reduction to the frequency of the oscillator output V_{OSC} ultimately results in a reduction in the frequency that the transistor 26 is

U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Disclosure
	switched on and off, and, consequently, a reduction in the energy that is transferred through the transformer TR1." '995 Patent, 7:10-22; *see also* '995 Patent, 7:11-10:6.
a drive circuit that provides said drive signal when said maximum duty cycle signal is in said first state and said regulation circuit is not disabled.	D_{MAX} is provided by oscillator 200 (Figure 5) in one of its two states. Duty cycle is set by the ratio of charge to discharge current. '995 Patent, 7:32-33. D_{MAX} is specified in the LM3101 datasheet as 90%-92%. See LM3101 datasheet at p. 3-162. As shown in Figures 1, 3, and 5, there is a drive circuit that provides the drive signal when the maximum duty cycle signal is in said first state and the regulation circuit is not disabled.  As shown in Figure 3, V_{out} is connected to the control input to the switch to drive the switch. "When input power (Vin) is applied to the primary-side controller/driver 24 it acts like a conventional controller at startup and gets the circuit running. Powered initially with current (e.g. 200 μA) from Vin via a dropping resistor (not shown), its own oscillator and PWM generator driver the supply's MOSFET power switch 26, which drive the primary winding of transformer TR1." '995 Patent, 3:66-4:5. "The secondary-side controller 22 effectively takes control of the supply and primary-side driver 24 becomes its slave. The slave's driver output 25 turns the power FET 26 on and off, only in response to PWM pulses from the secondary-side controller 22." '995 Patent, 4:17-21; *see also* '995 Patent, 4:21-5:17.

f. **Claim 17**

As established above, the Szepesi references anticipate Claim 11. As Claim 17 depends on Claim 11, it is established that all limitations of Claim 11 incorporated into Claim 17 are anticipated. One of ordinary skill in the art would be motivated to provide a rectifier in order to generate DC signal V_{in} in Figure 2 of the '995 patent. As detailed in the table below, the Szepesi references disclose each and every limitation of Claim 17 and, accordingly, anticipate Claim 17 under 35 U.S.C. § 102 (a) and (b).

U.S. Patent No. [illegible]	
17. The regulation circuit of claim 11 further comprising;	
a rectifier comprising a rectifier input and a rectifier output, said rectifier input receiving an AC mains signal and said rectifier output providing a rectified signal;	The invention of the '995 patent relates to isolated offline switching power supplies, and more particularly, to a controller for use with such power supplies which provides short-circuit protection. '995 patent at 1:10-13. In this context, "offline" means operated off of the power lines which precisely meets this claim element.
a power supply capacitor that receives said rectified signal and provides a substantially DC signal;	As shown in Figure 2, there is a power supply capacitor that receives said rectified signal and provides a substantially DC signal. 

U.S. Patent No. 6,107,851	Anticipated by '995 Patent and Related Documents
a first winding comprising a first terminal and a second terminal, said first winding receiving said substantially DC signal, said second terminal of said first winding coupled to said first terminal of said switch; and	As shown in Figure 2, there is a first winding comprising a first terminal and a second terminal, the first winding receiving the substantially DC signal, the second terminal of the first winding coupled to said first terminal of said switch. 
a second winding magnetically coupled to said first winding.	As shown in Figure 2, there is a second winding magnetically coupled to said first winding. 

V. CONSTRUCTION OF CLAIM TERMS IN THE '851 PATENT

The '851 patent and three other patents are currently the subject of litigation in the United States District Court for the District of Delaware (Civil Action No. 04-1371-JJF). This action was filed by the assignee of the '851 patent, Power Integrations, Inc., against Fairchild. The parties have set forth their respective positions as to how certain limitations of the referenced claims of the '851 patent should be construed in claim construction briefs. The Court has considered those positions and issued a Claim Construction Order. A copy of the Claim Construction Order is attached at **Exhibit C**. A copy of the Court's associated Memorandum Opinion is attached at **Exhibit D**.

A. The Court's Constructions Are Not Binding On The Patent Office

For purposes of examination, (including reexamination) the terms of the patent claims must be interpreted. During examination, claims are to be given their "broadest reasonable interpretation." MPEP, § 2111 (citing *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)). The interpretation must be consistent with the understanding of those of ordinary skill in the relevant art. MPEP, § 2111 (citing *In re Cortright*, 165 F.3d 1353, 1359 (Fed. Cir. 1999)).

Because of the different standards employed by the district courts and the Patent Office, in construing claims, the Delaware District Court's constructions are in no way binding on the Patent Office. See MPEP § 2286 and *In re Zletz*, 893 F.2d 319, 322 (Fed. Cir. 1989) (manner of claim interpretation that is used by courts in litigation is not the manner of claim interpretation that is applicable during prosecution of a pending application before the PTO). Accordingly, the Examiner is not bound by the Court's claim construction order or Memorandum Opinion.

B. Construction of Specific Terms From the Claims of the '851 Patent

The construction of three limitations of the referenced claims of the '851 patent are important in evaluating the invalidity of the claims at issue: "soft-start circuit" and "frequency variation signal" and "frequency variation circuit." "Frequency variation circuit" was construed as "a structure that provides the frequency variation signal" and thus will be considered in the context of that limitation.

a. "frequency variation signal"

Independent Claims 1 and 11 of the '851 patent include the term "frequency variation signal",

and the remaining claims include this term through dependency. The broadest reasonable interpretation (as required by MPEP §2111) of the term "frequency variation signal" is "a signal that is used to vary the frequency of the oscillation signal." *See Phillips*, 415 F.3d at 1316. This construction is consistent with the language of the claims of both the '366 patent and the '851 patent. For example, a limitation in Claims 1 and 11 of the '851 patent describes:

> an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal....

Ex. A, '851 patent, Claims 1 and 11; *see also* **Ex.C**, '366 patent, Claim 4 and 16. (emphasis added)

This construction is also consistent with the specification of the '851 patent. Applicants describe a prior art frequency variation circuit (140) and frequency variation signal (135). **Ex. A**, '851 patent, 3:18-39. Applicants state that the pulse width modulated switch of the invention "also comprises a frequency variation circuit that provides a frequency variation signal and an oscillator that provides an oscillation signal having a frequency that varies within a frequency range according to the frequency variation signal." **Ex. A**, '851 patent, 3:43-48.

The District Court construed "frequency variation signal" more narrowly, as:

> "an internal signal that cyclically varies in magnitude during a fixed period of time and is used to modulate the frequency of the oscillation signal within a predetermined frequency range."

This construction of "frequency variation signal" improperly imports three limitations from the preferred embodiments described in the specification of the '851 patent. *See Resonate, Inc. v. Alteon Websystems, Inc.*, 338 F.3d 1360 (Fed. Cir. 2003)(a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment). In particular, the Court's construction incorrectly requires that the signal 1) be internal, 2) vary cyclically in magnitude during a fixed period of time, and 3) be used to modulate the frequency of the oscillation signal within a predetermined frequency range.

The Court's additional limitation that the frequency variation signal be "an internal signal" is contradicted by the '851 Patent's prosecution history. During prosecution, in rejecting the claims as

anticipated under §102(b) by Prior Art Figure 1, the Examiner relied on an external resistor (140) as the frequency variation circuit for generating a frequency variation signal 135, which was likewise external. *See* **Ex. B**, '851 history, 12/13/99 Office Action at p. 4, ¶ 5. Applicants did not dispute the Examiner's reliance on external frequency variation circuits and signals. **Ex. B,** '851 history, 3/10/00 Amendment and Response at pp. 3, 6. Applicant's subsequent position during litigation apparently was induced by the realization that the claims as written were invalid unless additional limitations were read into the claims.

The Court's requirement that the frequency variation signal "cyclically var[y] in magnitude during a fixed period of time" is also incorrect. To begin the frequency variation signal 135 relied upon by the examiner was not cyclic. This limitation also conflicts with the specification of the '851 patent, where applicants state that the frequency variation signal can be any signal (including a non-cyclic signal) that "var[ies] in magnitude during a fixed period of time." *See* **Ex. A**, '851 patent, 6:37-88. Further, under the doctrine of claim differentiation, the term "frequency variation signal" cannot be limited to a signal that cyclically varies in magnitude during a fixed period of time because that limitation is added in dependent Claims 3 and 12. For example, Claim 3 adds the limitation that the frequency variation signal vary cyclically in magnitude during a fixed period of time by requiring an additional oscillator to provide the frequency variation signal; the signal generated by an oscillator is inherently cyclic. **Ex. A,** '851 patent, *compare* Claims 1 and 11 with Claims 3 and 12. For dependent Claims 3 and 12 to have meaning (and a more limited scope than the independent Claims 1 and 11), the broader independent claims cannot also be interpreted to require a frequency variation signal that varies cyclically in a fixed time period. *See Karlin Tech., Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971-72 (Fed. Cir. 1999) (doctrine of claim differentiation means that limitations stated in dependent claims are not to be read into the independent claims from which they depend).

The Court's requirement that the frequency variation signal be "used to modulate the frequency of the oscillation signal within a predetermined frequency range" also is overly narrow. **Ex. C**, Court's Claim Construction Order, at 34. The specification of the '851 patent makes clear that the frequency variation signal varies the frequency of the oscillation signal in any fashion – including varying the

frequency in a range that is not "predetermined." "The jitter current **135** is used to vary the frequency of the saw-toothed waveform generated by the oscillator contained in the pulse width modulated switch **90**." **Ex. A**, '851 patent, 3:14-17. Accordingly, the term "frequency variation signal" is best construed as "a signal that is used to vary the frequency of the oscillation signal."

b. "soft start circuit"

The term "soft-start circuit," appears in dependent Claims 4 and 13. The specification of the '851 patent states that "soft start functionality is termed to be a functionality that reduces the inrush currents at start up." **Ex. A**, '851 patent, 2:57-58. It is submitted that the broadest reasonable interpretation (as required by MPEP §2111) of the term "soft-start circuit" is "a circuit that minimizes inrush currents at start up." *See Phillips v. AWH Corporation*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) ("Our cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs.").

The District Court offered a narrower construction for this term which improperly reads in limitations from the preferred embodiments. *See In re Yujiro Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984) (Claims subject to reexamination will "be given their broadest reasonable interpretation consistent with the specification, and limitations appearing in the specification are not be read into the Claims.") The Court construed "soft-start circuit" as a means-plus-function element. The Court did not, however, expressly identify the disclosed structures but rather broadly referred to sections of the file history and the entirety of Figures 3, 6, and 9. The Court's construction of soft start circuit under 35 U.S.C. §112, ¶ 6 is much narrower than MPEP §2111 permits and is improper under Federal Circuit case law as well.

To begin, since the "soft start circuit" element is not written with "means for" language, it is presumed not to be a means-plus-function element. "The presumption flowing from the absence of the term 'means' is a strong one that is not readily overcome." *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354 (Fed. Cir. 2004). Here, it is even more difficult because the Federal Circuit has held that § 112, ¶ 6 should not typically apply to elements coupling the term "circuit" with an appropriate identifier or a description of the circuit's operation. *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364,

1371-72 (Fed. Cir. 2003)("The term 'circuit' with an appropriate identifier such as 'interface,' 'programming' and 'logic,' certainly identifies some structural meaning to one of ordinary skill in the art."); *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320 (Fed. Cir. 2004) (Thus, when the structure-connoting term "circuit" is coupled with a description of the circuit's operation, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art, and ə 112 ¶ 6 presumptively will not apply.") Accordingly, for the purpose of reexamination, the Court's construction of "soft start circuit" as means plus function should not be followed.

VI. STATEMENT OF COMPLIANCE WITH 37 C.F.R. § 1.510(B)(5)

Fairchild certifies that, pursuant to 37 C.F.R. 1.510(b)(5), it has served a copy of this request by mailing such copy Express Mail postage prepaid to the attorney of record for the patentee at the following address, which is the current address obtained from the PTO attorney database:

BLAKELEY, SOKOLOFF, TAYLOR, ZAFMAN LLP.
12400 Wilshire Boulevard, Seventh Floor
Los Angeles, CA 90025

A courtesy copy of this request was also served on litigation counsel for Power Integrations by mailing such copy Express Mail postage prepaid to the following address:

Frank E. Scherkenbach
FISH & RICHARDSON, P.C.
225 Franklin Street
Boston, MA 02110-2804

VII. CONCLUSION

The Requester believes that the above analysis indicates that the prior art attached hereto which was not considered previously by the Examiner, invalidates Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 of the '851 Patent under 35 U.S.C. § 102 or § 103. At a minimum, it is believed that the cited art raises a substantial new question of patentability, thereby justifying commencement an *ex parte* reexamination

proceeding. Accordingly, the Requester respectfully requests that the Commissioner establish a reexamination proceeding and give due consideration to the prior art and admissions discussed above.

Dated: November 9, 2006

Respectfully submitted,

Sanjeet K. Dutta
Reg. No. 46,145

EXHIBIT 2

PTO/SB/57 (04-05)
Approved for use through 04/30/2007. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

(Also referred to as FORM PTO-1465)

/1338 U.S. PTO

REQUEST FOR *EX PARTE* REEXAMINATION TRANSMITTAL FORM

U.S. PTO 90008326

11/09/06

11/09/06

Address to:
Mail Stop *Ex Parte* Reexam
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attorney Docket No.: 10414-25

Date: November 9, 2006

1. [X] This is a request for *ex parte* reexamination pursuant to 37 CFR 1.510 of patent number 6,249,876 issued June 19, 2001. The request is made by:

   [ ] patent owner. [X] third party requester.

2. [X] The name and address of the person requesting reexamination is:

   Sanjeet K. Dutta
   Orrick Herrington & Sutcliffe LLP
   1000 Marsh Road, Menlo Park, CA 94025

3. [ ] a. A check in the amount of $_____ is enclosed to cover the reexamination fee, 37 CFR 1.20(c)(1);

   [X] b. The Director is hereby authorized to charge the fee as set forth in 37 CFR 1.20(c)(1) to Deposit Account No. 15-0665 (submit duplicative copy for fee processing); or

   [ ] c. Payment by credit card. Form PTO-2038 is attached.

4. [X] Any refund should be made by [ ] check or [X] credit to Deposit Account No. 15-0665. 37 CFR 1.26(c). If payment is made by credit card, refund must be to credit card account.

5. [X] A copy of the patent to be reexamined having a double column format on one side of a separate paper is enclosed. 37 CFR 1.510(b)(4)

6. [ ] CD-ROM or CD-R in duplicate, Computer Program (Appendix) or large table
   [ ] Landscape Table on CD

7. [ ] Nucleotide and/or Amino Acid Sequence Submission
   If applicable, items a. – c. are required.

   a. [ ] Computer Readable Form (CRF)
   b. Specification Sequence Listing on:

      i. [ ] CD-ROM (2 copies) or CD-R (2 copies); or
      ii. [ ] paper

   c. [ ] Statements verifying identity of above copies

8. [X] A copy of any disclaimer, certificate of correction or reexamination certificate issued in the patent is included.

9. [X] Reexamination of claim(s) 1, 17, 18, 19 is requested.

10. [X] A copy of every patent or printed publication relied upon is submitted herewith including a listing thereof on Form PTO/SB/08, PTO-1449, or equivalent.

11/15/2006 JHDOUGA 00000001 150665 90008326
01 FC:1812 2520.00 DA

11. [ ] An English language translation of all necessary and pertinent non-English language patents and/or printed publications is included.

PTO/SB/57 (04-05)
Approved for use through 04/30/2007. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

12. [X] The attached detailed request includes at least the following items:

a. A statement identifying each substantial new question of patentability based on prior patents and printed publications. 37 CFR 1.510(b)(1)
b. An identification of every claim for which reexamination is requested, and a detailed explanation of the pertinency and manner of applying the cited art to every claim for which reexamination is requested. 37 CFR 1.510(b)(2)

13. [ ] A proposed amendment is included (only where the patent owner is the requester). 37 CFR 1.510(e)

14. [X] a. It is certified that a copy of this request (if filed by other than the patent owner) has been served in its entirety on the patent owner as provided in 37 CFR 1.33(c).
The name and address of the party served and the date of service are:

Blakeley, Sokoloff, Taylor, Zafman LLP
12400 Wilshire Boulevard, Seventh Floor
Los Angeles, CA 90025

Date of Service: November 9, 2006 ; or

[ ] b. A duplicate copy is enclosed since service on patent owner was not possible.

15. Correspondence Address: Direct all communication about the reexamination to:

[ ] The address associated with Customer Number:

OR

[X] Firm or Individual Name Sanjeet K. Dutta

Address 1000 Marsh Road

City Menlo Park | State CA | Zip 94025

Country USA

Telephone 650 614-7400 | Email

16. [X] The patent is currently the subject of the following concurrent proceeding(s):

[ ] a. Copending reissue Application No. _____
[ ] b. Copending reexamination Control No. _____
[ ] c. Copending Interference No. _____
[X] d. Copending litigation styled:

Power Integrations, Inc. CA No. 04-1371-JJF
v.
Fairchild Semiconductor International, INC

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Sanjeet Dutta
Authorized Signature

November 9, 2006
Date

Sanjeet K. Dutta
Typed/Printed Name

46,145
Registration No.

[ ] For Patent Owner Requester
[X] For Third Party Requester

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   Sanjeet K. Dutta
   Orrick Herrington & Sutcliffe LLP
   1000 Marsh Road, Menlo Park, CA 94025

3. [ ] a. A check in the amount of $_____ is enclosed to cover the reexamination fee, 37 CFR 1.20(c)(1);

   [X] b. The Director is hereby authorized to charge the fee as set forth in 37 CFR 1.20(c)(1) to Deposit Account No. 15-0665 (submit duplicative copy for fee processing); or

   [ ] c. Payment by credit card. Form PTO-2038 is attached.

4. [X] Any refund should be made by [ ] check or [X] credit to Deposit Account No. 15-0665. 37 CFR 1.26(c). If payment is made by credit card, refund must be to credit card account.

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      ii. [ ] paper
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9. [X] Reexamination of claim(s) 1, 17, 18, 19 is requested.

10. [X] A copy of every patent or printed publication relied upon is submitted herewith including a listing thereof on Form PTO/SB/08, PTO-1449, or equivalent.

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PTO/SB/57 (04-05)
Approved for use through 04/30/2007. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

12. [X] The attached detailed request includes at least the following items:

a. A statement identifying each substantial new question of patentability based on prior patents and printed publications. 37 CFR 1.510(b)(1)
b. An identification of every claim for which reexamination is requested, and a detailed explanation of the pertinency and manner of applying the cited art to every claim for which reexamination is requested. 37 CFR 1.510(b)(2)

13. [ ] A proposed amendment is included (only where the patent owner is the requester). 37 CFR 1.510(e)

14. [X] a. It is certified that a copy of this request (if filed by other than the patent owner) has been served in its entirety on the patent owner as provided in 37 CFR 1.33(c).
The name and address of the party served and the date of service are:

Blakeley, Sokoloff, Taylor, Zafman LLP
12400 Wilshire Boulevard, Seventh Floor
Los Angeles, CA 90025

Date of Service: November 9, 2006 ; or

[ ] b. A duplicate copy is enclosed since service on patent owner was not possible.

15. Correspondence Address: Direct all communication about the reexamination to:

[ ] The address associated with Customer Number: [ ]

OR

[X] Firm or Individual Name Sanjeet K. Dutta

Address 1000 Marsh Road

City Menlo Park | State CA | Zip 94025

Country USA

Telephone 650 614-7400 | Email

16. [X] The patent is currently the subject of the following concurrent proceeding(s):
[ ] a. Copending reissue Application No. _____
[ ] b. Copending reexamination Control No. _____
[ ] c. Copending Interference No. _____
[X] d. Copending litigation styled:

Power Integrations, Inc. v. Fairchild Semiconductor International, INC
CA No. 04-1371-JJF

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Sanjeet Dutta
Authorized Signature

November 9, 2006
Date

Sanjeet K. Dutta
Typed/Printed Name

46,145
Registration No.

[ ] For Patent Owner Requester
[X] For Third Party Requester

REQUEST FOR *EX PARTE* REEXAMINATION OF U.S. PATENT NO. 6,249,876

Attachment to Form PTO-1465
Providing Information about
Pat. No. 6,249,876
November 9, 2006
Express Mail No. [EV 859762242 US]

I. INTRODUCTION

Fairchild Semiconductor, Inc. ("Fairchild" or "Requester"), through these papers, requests that the Patent and Trademark Office grant this *ex parte* request to reexamine Claims 1, 17, 18, and 19 of U.S. Patent No. 6,249,876 ("the '876 patent") pursuant to the provisions of 35 U.S.C. §§ 302 *et seq.* and 37 C.F.R. § 1.510. A complete copy of the patent is enclosed as **Exhibit A**. A copy of the prosecution history of the '876 patent is attached as **Exhibit B.**

The inventors of the '876 patent are Balu Balakrisirshnan, Alex Djenguerian, and Leif Lund. Issuing on June 19, 2001, the '876 patent matured from U.S. Patent Application Serial No. 09/192,959. The '876 patent claims priority to the filing date of November 16, 1998. The '876 patent was assigned to Power Integrations, Inc. by its three listed inventors on November 13, 1998, recorded November 16, 1998 attached as **Exhibit E**. A certificate of correction issued on February 19, 2002.

Power Integrations sued Fairchild on October 20, 2004 for infringement of the '876 patent in the United States District Court for the District of Delaware (Civil Action No. 04-1371-JJF) ("the Litigation"). A claim construction order was entered on March 31, 2006. Six phrases relating to the scope of the '876 patent were construed by the Court. They are "frequency jittering," "coupled," "primary voltage," "secondary voltage," "combining," and "supplemental voltage." Power Integrations originally asserted Claims 1, 17, 18, and 19 during litigation. The

litigation was bifurcated into an infringement / damages phase and an invalidity phase. The infringement / damages trial took place from October 2-6, 2006. The jury found that certain Fairchild products infringed Claim 1 of the '876 patent. (Claims 17-19 were not tried.) The invalidity trial is scheduled to begin on December 4, 2006. A final judgment has not been entered in the case, and thus it is not yet ripe for appeal.

The undersigned is counsel of record in that case and represents that he is authorized to act in a representative capacity for Fairchild Semiconductor, Inc. Requester provides the fee for reexamination herewith in the amount of $2,520.00 and the fee for submitting an Information Disclosure Statement of $180.00.

A complete and entire copy of this Request for *ex parte* Reexamination and all supporting documents have been provided to the patent owner, Power Integrations, by serving Power Integrations' counsel of record in the litigation at 225 Franklin Street, Boston, MA 02110-2804. An additional copy was served on BLAKELEY, SOKOLOFF, TAYLOR, ZAFMAN LLP., attorney of record for the '876 patent, at 12400 Wilshire Boulevard, Seventh Floor, Los Angeles, CA 90025.

II. SUBSTANTIAL NEW QUESTION OF PATENTABILITY PURSUANT TO 37 C.F.R. § 1.510(b)(1)

This Reexamination Request is based upon the following prior art references.

1. U.S. Patent No. 4,638,417 ("Martin"). Attached to PTO Form 1449 as **Reference AA.**

2. "Acoustic Noise Reduction In Sinusoidal PWM Drives Using A Randomly Modulated Carrier", IEEE Transactions on Power Electronics, Vol. 6, No. 3, p. 356 (published July 1991) by T.G. Habetler and D.M. Divan ("Habetler"). Attached to PTO Form 1449 as **Reference CB.**

3. "Programmed Pulsewidth Modulated Waveforms For Electromagnetic Interference Mitigation In DC-DC Converters", IEEE Transactions on Power Electronics, Vol. 8, No. 4 (October 1993) by A.C. Wang and S. R. Sanders ("Wang"). Attached to PTO Form 1449 as **Reference CA.**

The Martin patent issued on January 20, 1987 and has a filing date of August 16, 1985. Martin is prior art to the '876 patent under 35 U.S.C. § 102(a), § 102(b), and § 102(e). Martin describes a digital frequency jittering circuit for use in power converters which varies the frequency of a voltage-controlled oscillator to reduce or eliminate EMI, as recited in claim 1 of the '876 patent. **Ref. AA**, 1:66-68. This teaching was not present during the prior examination of the '876 patent. Requestor believes that a reasonable examiner would consider this teaching important in determining whether or not the claims are patentable. Requestor respectfully submits that the Martin patent anticipates Claim 1 of the '876 patent. Requestor also submits that Claim 1 of the '876 patent is invalid as being obvious under 35 U.S.C. § 103 over Martin in view of one of ordinary skill in the art at the time the invention was made. For these reasons, Martin raises a substantial new question of patentability with respect to at least Claim 1 of the '876 patent.

Habetler was published in IEEE Transactions on Power Electronics Journal in July of 1991. Habetler qualifies as prior art to the '876 patent under § 102(a) and § 102(b). Habetler describes varying the switching frequency in a sinusoidal power converter in order to reduce acoustic noise. This teaching was not present during the prior examination of the '876 patent. Requestor believes that a reasonable examiner would consider this teaching important in determining whether or not the claims are patentable. Requestor respectfully submits that Habetler anticipates Claims 1, 17, 18, and 19 of the '876 patent. Requestor also submits that Claim 1 of the '876 patent is invalid as being obvious under 35 U.S.C. § 103 over Habetler in view of one of ordinary skill in the art at the time the invention was made. For these reasons, Habetler raises a substantial new question of patentability with respect to at least Claims 1, 17, 18, and 19 of the '876 patent.

Wang was published in October of 1993 in the IEEE Transactions on Power Electronics Journal, and so is a prior art reference under § 102(a) and § 102(b). This article describes the use of frequency variation via a digitally controlled analog waveform for EMI reduction in DC-DC power converters. Requestor believes that a reasonable examiner would consider this teaching

important in determining whether or not the claims are patentable. Requestor respectfully submits that Wang anticipates Claim 1 of the '876 patent. Requestor also submits that Claim 1 of the '876 patent is invalid as being obvious under 35 U.S.C. § 103 over Wang in view of one of ordinary skill in the art at the time the invention was made. For these reasons, Wang raises a substantial new question of patentability with respect to at least Claim 1 of the '876 patent.

III. CLAIMS FOR WHICH REEXAMINATION IS REQUESTED

Reexamination is requested of Claims 1, 17, 18, and 19 of the '876 patent in view of Martin, Habetler, and Wang. For the Examiner's convenience, Requestor includes copies of the cited art, which are attached to PTO Form 1449.

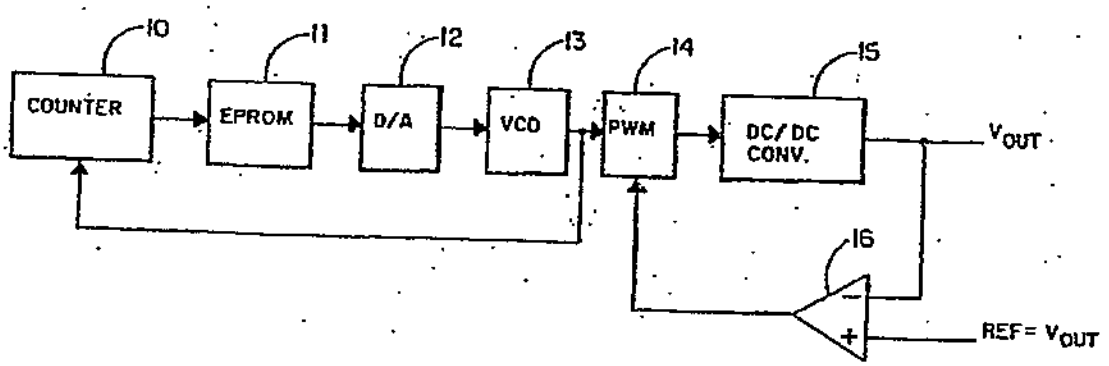
Requestor sets forth below a chart comparing each element of Claim 1 of the '876 patent with a corresponding disclosure from Martin that demonstrates that Martin anticipates Claim 1 of the '876 patent. Requestor further sets forth below a chart comparing each element of Claims 1, 17, 18, and 19 of the '876 patent with a corresponding disclosure from Habetler that demonstrates that Habetler anticipates Claims 1, 17, 18, and 19 of the '876 patent. Finally, Requestor sets forth below a chart comparing each element of Claim 1 of the '876 patent with a corresponding disclosure from Wang that demonstrates that Wang anticipates Claim 1 of the '876 patent.

IV. EXPLANATION OF PERTINENCE AND MANNER OF APPLYING MARTIN, HABETLER, AND WANG TO CLAIMS 1, 17, 18, AND 19 OF THE '876 PATENT

Claims 1, 17, 18, and 19 of the '876 patent disclose a frequency jittering circuit for use in power supplies in electronic devices. The concept of jittering the frequency of a power supply in order to reduce EMI has been around for almost 20 years. Furthermore, the very same circuit configuration described by the '876 patent to jitter the frequency (a digital to analog converter, connected to a counter, connected to an oscillator) was used for precisely that purpose. All the limitations of Claims 1, 17, 18, and 19 are found in at least one of the three references discussed below.

A. Martin Anticipates Claim 1 of the '876 Patent

Martin's frequency jittering circuit is illustrated in the sole figure of the Martin patent.



Claim 1 of the '876 patent recites "*an oscillator for generating a signal having a switching frequency, the oscillator having a control input for varying the switching frequency.*" **Ex. A**, Claim 1. The Martin circuit includes voltage-controlled oscillator (VCO) 13. VCO 13 generates a signal with a switching frequency that varies according to a control input. **Ref. AA**, 2:46-49 ("This analog signal is then applied to VCO 13 which produces an oscillating signal which has a frequency which is representative of the amplitude of the analog signal."); 2:39-40 ("the output signal produced by VCO 13 varies in frequency"). In other words, as the amplitude of the analog signal applied to the control input of VCO 13 changes, so does the frequency of the signal generated by the oscillator.

Claim 1 also includes the limitation of "*a digital to analog converter coupled to the control input for varying the switching frequency.*" **Ex. A**, Claim 1. The Martin circuit includes a digital to analog converter (D/A) 12. See **Ref. AA**, 2:34-35. As described in Martin and illustrated in the figure, D/A converter 12 is connected directly to the control input of the oscillator. **Ref. AA**, 2:35-49 (The D/A converter 12 supplies an analog signal to the VCO 13). The analog signal is used to vary the switching frequency of the signal generated by the

oscillator in the manner described in the preceding paragraph.

Claim 1 recites "*a counter coupled to the output of the oscillator and to the digital to analog converter, the counter causing the digital to analog converter to adjust the control input and to vary the switching frequency.*" **Ex. A**, Claim 1. The Martin circuit includes COUNTER 10. As shown in the above figure, the output of VCO 13 is directly connected to COUNTER 10. COUNTER 10 is also coupled to D/A converter 12 through EPROM 11. The Martin patent describes how COUNTER 10 causes D/A converter 12 to adjust the control input to the oscillator and to vary the switching frequency of the oscillator:

> Thus, as the output signal produced by VCO 13 varies in frequency, the counter 10 is caused to count at different rates. **With counter 10 counting at different rates the EPROM 11 is stepped or addressed at different rates.** The content of the PROM are... a pseudo random code in digital form. The digital signal from the PROM 11 is converted to an analog signal by D/A converter 12. **This analog signal is then applied to VCO 13 which produces an oscillating signal which has a frequency which is representative of the amplitude of the analog signal.**

Ref. AA, 2:39-49 (emphasis added); *see also* 4:8-11. Accordingly, Martin teaches each and every element of Claim 1 of the '876 patent.

Martin teaches that as COUNTER 10 is incremented it provides signals to EPROM 11, which uses those signals to look up digital signals stored at addresses in the EPROM which are identified by the counter signals. **Ref. AA**, 2:39-49. The digital signal stored in the EPROM at the particular addresses identified by the counter signals are then passed to the digital to analog converter, which converts the digital signal to an analog form and provides it to the control input of the oscillator:

> Consequently, when counter 10 produces an output signal, it selectively steps the PROM [11] (or ROM) through its addressing routine in order to select the contents of a particular address. **The contents of PROM 11 are stored in digital form.** These digital signals are supplied to **the digital-to-analog converter 12 [which] supplies an analog signal to the VCO 13.**

Ref. AA, 2:29-36 (emphasis added).

COUNTER 10 controls D/A converter 12 and causes it to adjust the control input of

oscillator VCO 13 and thus to vary the switching frequency of the oscillator. **Ref. AA**, 2:39-49. Even considering the additional feature of EPROM 11, Martin teaches each and every element of claim 1 of the '876 patent.

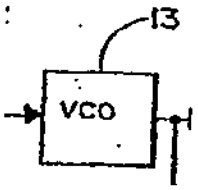
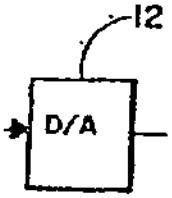
In fact, the only difference between Claim 1 of the '876 patent and the circuit shown in Martin is that Martin adds an EPROM or other storage means between the counter and the D/A converter. The fact that Martin includes an additional component should be irrelevant to anticipate, as Martin nonetheless discloses each and every element of Claim 1.

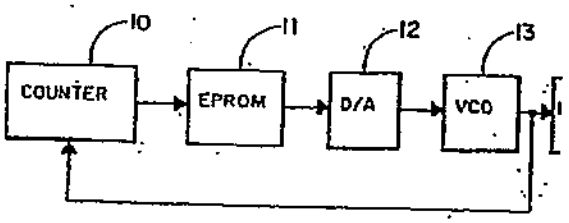
In any event, it would be obvious to one skilled in the art to remove the storage means from Martin, so that the counter would be directly connected to the D/A converter. It would be obvious to do this because the storage means is not necessary to vary the frequency of the circuit. The storage means merely adds a level of complexity to the circuit claimed in Claim 1 of the '876 patent by enabling storage of a prescribed signal pattern. **Ref. AA**, 4:5-7 ("including storage means for storing a prescribed signal pattern which is selectively supplied to said VCO means"). While removing the EPROM element would simplify the circuit, Martin still teaches each and every element of Claim 1 of the '876 patent.

1. Claim 1

Claim 1 is an independent claim that Martin anticipates. As detailed in the table below, Martin discloses each and every limitation of Claim 1. Accordingly, Requestor expressly proposes the rejection of at least Claim 1 under 35 U.S.C. §§ 102 (a), (b), and (e) as being anticipated by Martin. Requestor also proposes the rejection of at least Claim 1 as being obvious under 35 U.S.C. § 103 over Martin in view of one of ordinary skill in the art at the time the invention was made.

'876 Patent Claim 1	**Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 ("Martin")**
1. A digital frequency jittering circuit for varying the switching frequency of a power supply, comprising:	Martin describes a digital frequency jittering circuit for varying the switching frequency of a power supply. "Referring now to the sole FIGURE, there is

'876 Patent Claim 1	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 ("Martin")
	shown a **circuit which reduces electromagnetic interference (EMI) by frequency modulation of power converters.**" **Ref. AA**, 1:66-68 (emphasis added).
an oscillator for generating a signal having a switching frequency, the oscillator having a control input for varying the switching frequency;	As shown in the Figure, there is an oscillator (VCO 13) for generating a signal having a switching frequency, the oscillator having a control input for varying the switching frequency.  "This analog signal is then applied to **VCO 13 which produces an oscillating signal which has a frequency** which is representative of the amplitude of the analog signal. The VCO output signal is supplied to the pulse width modulator 14 which **varies the chopping rate of the signal from the VCO 13** while maintaining a constant duty ratio." **Ref. AA**, 2:46-52 (emphasis added). "Thus, as the output signal produced by VCO 13 **varies in frequency**, the counter 10 is caused to count at different rates." **Ref. AA**, 2:39-41 (emphasis added).
a digital to analog converter coupled to the control input for varying the switching frequency; and	As shown in the Figure, there is a digital to analog converter (D/A 12) coupled to the control input of the oscillator (VCO 13) for varying the switching frequency.  "The digital signal from the PROM 11 is converted to an analog signal by **D/A converter 12. This analog signal is then applied to VCO 13** which produces an oscillating signal which has a frequency which is representative of the amplitude of the analog signal." **Ref. AA**, 2:44-49 (emphasis added).

'876 Patent Claim 1	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 ("Martin")
a counter coupled to the output of the oscillator and to the digital to analog converter, the counter causing the digital to analog converter to adjust the control input and to vary the switching frequency.	As shown in the Figure, there is a counter (COUNTER 10) coupled to the output of the oscillator (VCO 13) and to the digital to analog converter (D/A 12, coupled to the oscillator through the ROM element EPROM 11), the counter causing the digital to analog converter to adjust the control input and to vary the switching frequency.  "The **output signal from the VCO 13 is also fed back to counter 10** which can be any suitable counter of any prescribed length." **Ref. AA**, 2:20-22 (emphasis added). "The output of the counter 10 is connected to the input of EPROM 11 which can be any suitable kind of storage device.... The contents of the PROM 11 are stored in digital form. These digital signals are supplied to the digital-to-analog converter 12. The D/A converter 12 supplies an analog signal to the VCO 13." **Ref. AA**, 2:22-36. "Thus, as the output signal produced by VCO 13 varies in frequency, the counter 10 is caused to count at different rates. **With counter 10 counting at different rates** the EPROM 11 is stepped or addressed at different rates. The content of the PROM are ... a pseudo random code in digital form. **The digital signal from the PROM 11 is converted to an analog signal by D/A converter 12. This analog signal is then applied to VCO 13** which produces an oscillating signal which has a frequency which is representative of the amplitude of the analog signal." **Ref. AA**, 2:39-49 (emphasis added). Martin's use of the EPROM element does not prevent it from anticipating claim 1, because the COUNTER 10 is still coupled to the digital to analog converter (D/A 12). The EPROM 11 uses the signal from the COUNTER 10 to look up stored digital

'876 Patent Claim 1	Anticipated or Rendered Obvious by U.S. Patent No. 4,638,417 ("Martin")
	signals. "Consequently, when counter 10 produces an output signal, it selectively steps the PROM [11] (or ROM) through its addressing routine in order to select the contents of a particular address." 2:29-32. The EPROM has a one-to-one correspondence from input to output. Every time the EPROM element receives a given input value, it will produce the same given output value. In any event, it would be obvious to one skilled in the art to remove the EPROM or other storage means from Martin, so that the counter would be directly connected to the D/A converter. It would be obvious to do this because the storage means is not necessary to vary the frequency of the circuit. The storage means merely adds a level of complexity to the circuit claimed in Claim 1 of the '876 patent by enabling storage of a prescribed signal pattern. **Ref. AA**, 4:5-7 ("including storage means for storing a prescribed signal pattern which is selectively supplied to said VCO means"). While removing the EPROM element would simplify the circuit, Martin still teaches each and every element of Claim 1 of the '876 patent.

B. Habetler Anticipates Claims 1, 17, 18, and 19 of the '876 Patent

Habetler describes varying the switching frequency of a sinusoidal power converter in order to reduce acoustic noise:

> Acoustic noise in an inverter-driven electric machine can be reduced by avoiding the concentration of harmonic energy in distinct tones. **One method to spread out the harmonic spectrum without the use of programmed PWM is to cause the switching pattern to be random.** It is proposed that the switching pattern can be randomized by modulating the triangle carrier in sinusoidal PWM with band-limited white noise.
> * * *
> It is proposed that an effective method of spreading the spectral content of the applied voltage is by randomly modulating the triangle carrier in sinusoidal PWM. **In this way, the energy in the tones around the switching frequency is spread out with subsequent reduction in peak values.** The random modulator

> maintains the advantages of sinusoidal PWM including constant average switching frequency, linear amplification, and real-time control. **The instantaneous switching frequency variation is small and can be predetermined.**

Id., pp. 356, 361-62. Figure 5 of Habetler shows an oscillator (labeled "Triangle Generator" in the figure) that generates a signal having a switching frequency, and that has a control input for varying the switching frequency.

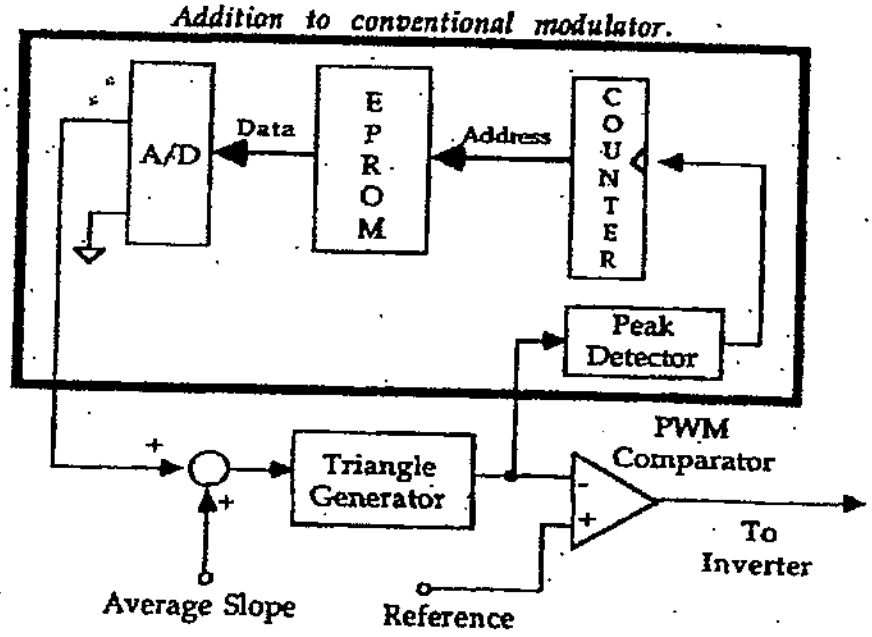


Fig. 5. Block diagram illustrating implementation of random carrier sinusoidal PWM regulator where noise source is generated digitally and stored in look-up table.

Figure 5 of Habetler also shows a digital to analog converter (labeled "A/D" because the signals are drawn moving right to left in the figure rather than left to right) coupled to the control input for varying the switching frequency by varying the slope of the triangle wave. **Ref. CB**, pp. 359 ("[t]he output of the ROM is then sent through a digital to analog converter to get the slope of the triangle wave.") Figure 5 illustrates a counter coupled to the output of the Triangle Generator and to the digital to analog converter, the counter causing the digital to analog converter to adjust the control input and to vary the switching frequency. Habetler thus teaches

each element of Claim 1 of the '876 patent. As discussed above, the EPROM does not prevent the counter from being "coupled" to the digital to analog converter, as recited in Claim 1 of the '876 patent.

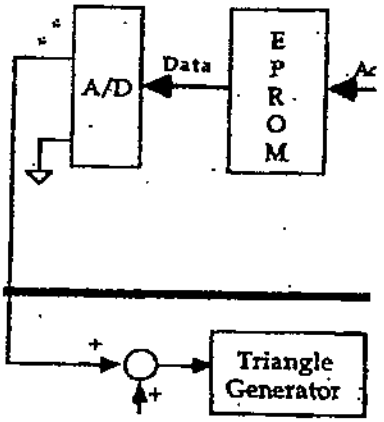
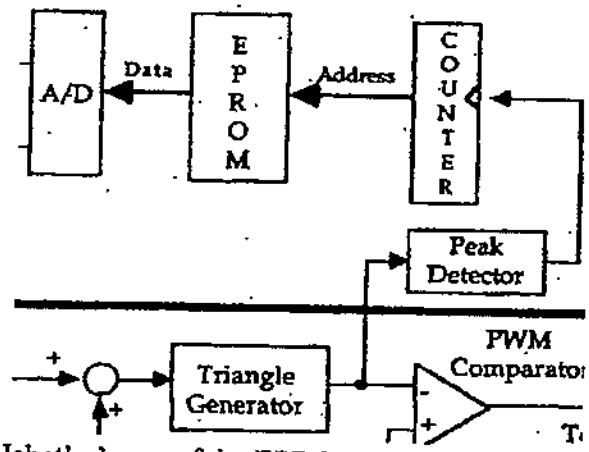
Alternatively, it would be obvious to one skilled in the art to remove the EPROM element from Habetler, so that the COUNTER would be directly connected to digital to analog converter (A/D). It would be obvious to do this because the EPROM element is not necessary to vary the frequency of the circuit. The EPROM element merely introduces a greater degree of complexity. While removing the EPROM element would eliminate this greater degree of complexity, such a simplified circuit would still vary the frequency.

1. Claim 1

Claim 1 is an independent claim that Habetler anticipates. As detailed in the table below, Habetler discloses each and every limitation of Claim 1. Accordingly, Requestor expressly proposes the rejection of at least Claim 1 under 35 U.S.C. § 102 (a) and (b) as being anticipated by Habetler. Requestor also proposes the rejection of at least Claim 1 as being obvious under 35 U.S.C. § 103 over Habetler in view of one of ordinary skill in the art at the time the invention was made.

'876 Patent Claim 1	**Anticipated or Rendered Obvious by Habetler**
1. A digital frequency jittering circuit for varying the switching frequency of a power supply, comprising:	Habetler teaches a digital frequency jittering circuit for varying the switching frequency of a power supply. "Acoustic noise in an inverter-driven electric machine can be reduced by avoiding the concentration of harmonic energy in distinct tones. One method to spread out the harmonic spectrum without the use of programmed PWM is to cause the switching pattern to be random. It is proposed that the switching pattern can be randomized by modulating the triangle carrier in sinusoidal PWM with band-limited white noise." **Ref. CB**, pp. 356. "It is proposed that **an effective method of**

'876 Patent Claim 1	Anticipated or Rendered Obvious by Habetler
	spreading the spectral content of the applied voltage is by randomly modulating the triangle carrier in sinusoidal PWM. In this way, the energy in the tones around **the switching frequency is spread out with subsequent reduction in peak values.** The random modulator maintains the advantages of sinusoidal PWM including constant average switching frequency, linear amplification, and real-time control." **Ref. CB**, pp. 361-362 (emphasis added).
an oscillator for generating a signal having a switching frequency, the oscillator having a control input for varying the switching frequency;	Figure 5 shows an oscillator that is a "Triangle Generator." The Triangle Generator generates a signal with a switching frequency. An input to the Triangle Generator varies the switching frequency.  "It is proposed that **an effective method of spreading the spectral content of the applied voltage is by randomly modulating the triangle carrier in sinusoidal PWM.** In this way, the energy in the tones around **the switching frequency is spread out with subsequent reduction in peak values.** The random modulator maintains the advantages of sinusoidal PWM including constant average switching frequency, linear amplification, and real-time control." **Ref. CB**, pp. 361-362 (emphasis added). "Fig. 5 shows another method for implementing the random carrier PWM regulator. In this approach the band limited noise generator is implemented using a lookup table, whose contents have been generated apriori, off line. That is, a large quantity of periodic random numbers can be computer generated and stored in some type of ROM. If the quantity of numbers is large, the repetition rate of the random numbers can be made large say, greater than one second, and will have no effect on the resulting voltage spectra. The output of the ROM is then sent through a digital to analog converter to get the slope of the triangle wave." **Ref. CB**, pp. 359.

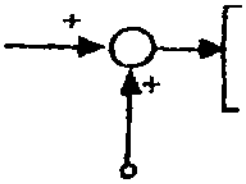
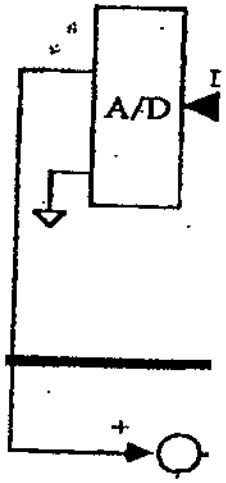
'876 Patent Claim 1	Anticipated or Rendered Obvious by Habetler
a digital to analog converter coupled to the control input for varying the switching frequency; and	Figure 5 shows a block labeled "A/D" coupled to the input of the triangle generator for varying the switching frequency of the triangle wave by varying the slope of the triangle wave. This "A/D" block is a digital to analog converter that converts a digital signal received from the EPROM into an analog signal.  "The output of the ROM is then sent through a digital to analog converter to get the slope of the triangle wave." **Ref. CB**, pp. 359.
a counter coupled to the output of the oscillator and to the digital to analog converter, the counter causing the digital to analog converter to adjust the control input and to vary the switching frequency.	Figure 5 illustrates a counter coupled to the output of the triangle generator and to the block labeled "A/D", which is a digital to analog converter. The counter causes the digital to analog converter to adjust the control input and vary the switching frequency.  Habetler's use of the EPROM element does not prevent it from anticipating claim 1, because the COUNTER is still "coupled" to the digital to analog converter (A/D). The EPROM uses the

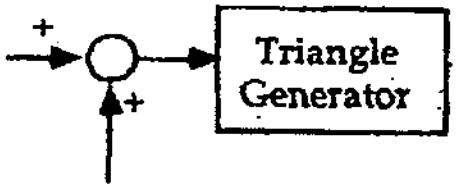
'876 Patent Claim 1	Anticipated or Rendered Obvious by Habetler
	signal from the COUNTER to look up a stored digital signal. The EPROM has a one-to-one correspondence from input to output. Every time the ROM element receives a given input value, it will produce the same given output value. Alternatively, it would be obvious to one skilled in the art to remove the EPROM element from Habetler, so that the COUNTER would be directly connected to digital to analog converter (A/D). It would be obvious to do this because the EPROM element is not necessary to vary the frequency of the circuit. The EPROM element merely adds a level of complexity to the circuit claimed in claim 1 of the '876 patent. While removing the EPROM element would simplify the circuit, such a simplified circuit would still vary the frequency.

2. Claim 17

Claim 17 is an independent claim that Habetler anticipates. As detailed in the table below, Habetler discloses each and every limitation of Claim 17. Accordingly, Requestor expressly proposes the rejection of at least Claim 17 under 35 U.S.C. § 102 (a) and (b) as being anticipated by Habetler.

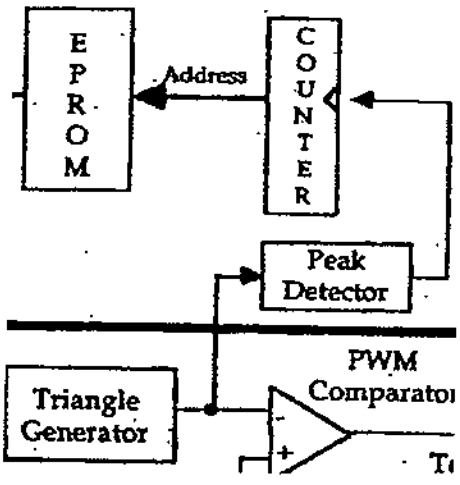
'876 Patent Claim 17	Anticipated by Habetler
17. A method for generating a switching frequency in a power conversion system, comprising:	Habetler teaches a method for generating a switching frequency in a power conversion system. "Acoustic noise in an inverter-driven electric machine can be reduced by avoiding the concentration of harmonic energy in distinct tones. **One method to spread out the harmonic spectrum without the use of programmed PWM is to cause the switching pattern to be random. It is proposed that the switching pattern can be randomized by modulating the triangle carrier in sinusoidal PWM with band-limited white noise." Ref. CB**, pp. 356 (emphasis added). "It is proposed that **an effective method of spreading the spectral content of the applied**

'876 Patent Claim 17	Anticipated by Habetler
	voltage is by randomly modulating the triangle carrier in sinusoidal PWM. In this way, the energy in the tones around **the switching frequency is spread out with subsequent reduction in peak values.** The random modulator maintains the advantages of sinusoidal PWM including constant average switching frequency, linear amplification, and real-time control." **Ref. CB**, pp. 361-362 (emphasis added).
generating a primary voltage;	Habetler teaches generating a primary voltage, which is labeled "average slope" in Figure 5.  Average Slope
cycling one or more secondary voltage sources to generate a secondary voltage which varies over time; and	Habetler teaches cycling one or more secondary voltage sources to generate a secondary voltage, which is the output of the "A/D" block.  This secondary voltage varies over time.
combining the secondary voltage with the primary voltage to be received at a control input of a voltage-controlled oscillator for generating a switching frequency which is varied over time.	As shown in Figure 5, Habetler teaches that the secondary voltage is combined with the primary voltage at a voltage summer at the control input of the voltage controlled oscillator (Triangle Generator) to generate a switching frequency that is varied over time.

'876 Patent Claim 17	Anticipated by Habetler
	

3. Claim 18

Dependent Claim 18 adds to Claim 17 the limitation that the device of Claim 17 has a counter clocked with the output of the oscillator. Because Claim 18 depends on Claim 17, all limitations of Claim 17 incorporated into Claim 18 are anticipated. As detailed in the table below, Habetler discloses each and every limitation of Claim 18. Accordingly, Requestor expressly proposes the rejection of at least Claim 18 under 35 U.S.C. § 102 (a) and (b) as being anticipated by Habetler.

'876 Patent Claim 18	Anticipated by Habetler
18. The method of claim 17 further comprising clocking a counter with the output of the oscillator.	As shown in Figure 5, Habetler teaches clocking a counter (COUNTER) with the output of the oscillator (Triangle Generator). 

4. Claim 19

Dependent Claim 19 adds to Claim 17 the limitation that the primary voltage is V and each of the secondary voltage sources generates a supplemental voltage lower than V, further comprising passing the supplemental voltage to the voltage-controlled oscillator. Because Claim 19 depends on Claim 17, all limitations of Claim 17 incorporated into Claim 19 are anticipated. As detailed in the table below, Habetler discloses each and every limitation of Claim 19. Accordingly, Requestor expressly proposes the rejection of at least Claim 19 under 35 U.S.C. § 102 (a) and (b) as being anticipated by Habetler.

'876 Patent Claim 19	Anticipated by Habetler
19. The method of claim 17 wherein the primary voltage is V and each of the secondary voltage sources generates a supplemental voltage lower than V, further comprising passing the supplemental voltage to the voltage-controlled oscillator.	Habetler teaches that the supplemental voltages generated by the secondary voltage sources are lower than the primary voltage. "The triangle carrier and the line switching function are shown in Fig. 6. Note that there is very little perceivable difference in the triangle wave with and without random modulation, since the instantaneous frequency is varying only slightly." **Ref. CB** pp. 359. The supplemental voltage is passed to the voltage-controlled oscillator.

C. **Wang Anticipates Claim 1 of the '876 Patent**

This article describes the use of frequency variation via a digitally controlled analog waveform for EMI reduction in DC-DC power converters. Wang by itself anticipates all of the elements listed in Claim 1.

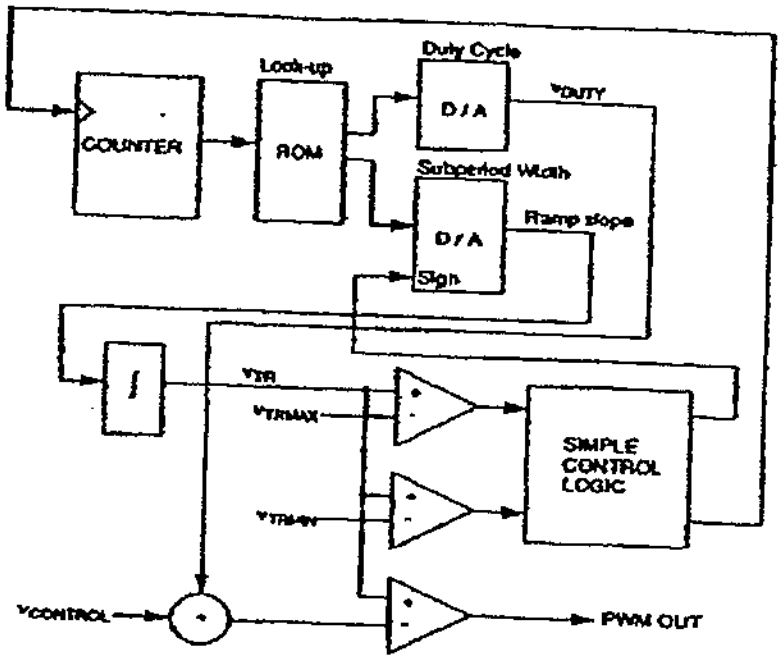
Wang discloses a circuit for reducing the EMI of a power converter by varying the switching frequency of the device:

> In this paper, a method to generate an optimal programmed switching waveform for a dc-dc converter is presented. **This switching waveform is optimized to reduce the amplitude of harmonic peaks in the EMI generated by the converter.**

. . .

The main approaches considered in this paper rely on the fact that it is possible to operate a PWM type **power circuit with a time-varying switching frequency** provided the average duty cycle is not disturbed. We employ a programmed waveform that repeats itself after K cycles. A typical programmed PWM waveform and its spectrum is illustrated in Fig. 1(b). Compared to regular PWM, the programmed PWM has a harmonic spacing that is smaller by a factor of K. The extra available harmonic frequencies are used to spread out the spectral energy of a given circuit waveform.

Ref. CA, pp. 596.



Ref. CA, pp. 604, figure 20.

As demonstrated in figure 20 above, Wang contains each and every limitation of Claim 1 of the '876 patent. Figure 20 illustrates an oscillator for generating a signal having a switching frequency ("V_{TR}") and having a control input ("Ramp slope") for varying the switching frequency. It shows a digital to analog converter ("D/A, subperiod width") coupled to the control input ("Ramp slope") for varying the switching frequency. And, it shows a counter (COUNTER) coupled to the output of the oscillator and (through the ROM element) to the digital to analog converter (D/A), the counter causing the digital to analog converter to adjust the control input and to vary the switching frequency. Wang describes the oscillator element

(referred to as a waveform generator) in detail:

> **A full implementation of the programmed waveform generator with a continuous control input can be based on a programmable triangle waveform generator.** Two numbers are stored for every subperiod. One controls the slope of the triangle waveform, and therefore, the length of the subperiod. The other is added to the control signal, and therefore changes the duty ratio of a given subperiod from the average. **The important waveforms and the resulting programmed PWM output are shown in Fig. 19. A block diagram implementation is shown in Fig. 20.**

Ref. CA, pp. 603-04 (emphasis added).

As with Martin, described above, the ROM element between the counter and the digital to analog converter does not prevent the described circuit from anticipating the '876 patent. The ROM merely functions as a lookup table to add a degree of complexity to the variation of the control input provided by the counter. **Ref. CA**, pp. 604. Again it is the counter that enables the selection of different signals stored in the ROM and thus that causes the digital to analog converter to adjust the control input and vary the switching frequency.

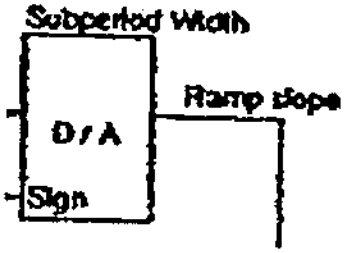
Alternatively, it would be obvious to one skilled in the art to remove the ROM element from Wang, so that the COUNTER would be directly connected to digital to analog converter (D/A). It would be obvious to do this because the ROM element is not necessary for the Wang circuit vary the frequency. The ROM element merely adds a level of complexity to the circuit claimed in claim 1 of the '876 patent. While removing the ROM element would simplify the circuit, the simplified circuit would still vary the frequency.

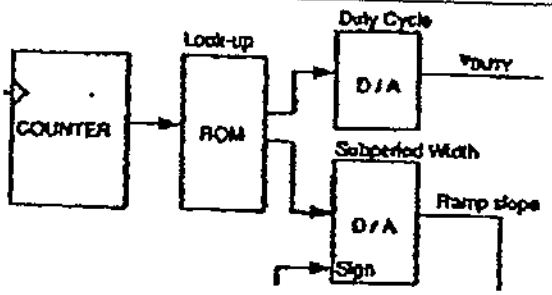
1. Claim 1

Claim 1 is an independent claim that Wang anticipates. As detailed in the table below, Wang discloses each and every limitation of Claim 1. Accordingly, Requestor expressly proposes the rejection of at least Claim 1 under 35 U.S.C. § 102 (a) and (b) as being anticipated by Wang. Requestor also proposes the rejection of at least Claim 1 as being obvious under 35 U.S.C. § 103 over Wang in view of one of ordinary skill in the art at the time the invention was

made.

'876 Patent Claim 1	Anticipated or Rendered Obvious by Wang
1. A digital frequency jittering circuit for varying the switching frequency of a power supply, comprising:	Wang teaches a digital frequency jittering circuit for varying the switching frequency of a power supply. "In this paper, a method to generate an optimal programmed switching waveform for a dc-dc converter is presented. This switching waveform is optimized to reduce the amplitude of harmonic peaks in the EMI generated by the converter." Abstract. "The main approaches considered in this paper rely on the fact that **it is possible to operate a PWM type power circuit with a time-varying switching frequency** provided the average duty cycle is not disturbed. We employ a programmed waveform that repeats itself after *K* cycles. A typical programmed PWM waveform and its spectrum is illustrated in Fig. 1(b). Compared to regular PWM, the programmed PWM has a harmonic spacing that is smaller by a factor of *K*. The extra available harmonic frequencies are used to spread out the spectral energy of a given circuit waveform. (emphasis added) Section II of the paper reviews the main techniques considered in the literature. **Sections III and IV illustrate the application of these methods in the context of a dc-dc converter." Ref. CA**, pp. 596 (emphasis added).
an oscillator for generating a signal having a switching frequency, the oscillator having a control input for varying the switching frequency;	Wang teaches an oscillator for generating a signal having a switching frequency (V_{TR}), the oscillator having a control input (Ramp slope) for varying the switching frequency. **"A full implementation of the programmed waveform generator with a continuous control input can be based on a programmable triangle waveform generator.** Two numbers are stored for every subperiod. One controls the slope of the

'876 Patent Claim 1	Anticipated or Rendered Obvious by Wang
	triangle waveform, and therefore, the length of the subperiod. The other is added to the control signal, and therefore changes the duty ratio of a given subperiod from the average. The important waveforms and the resulting programmed PWM output are shown in Fig. 19. A block diagram implementation is shown in Fig. 20. **Note that the average duty cycle can be varied linearly with the standard duty ratio control signal, marked $V_{CONTROL}$ in Fig. 19.** However, the linear range is smaller than with regular PWM in this implementation because of the variation in the D_k's." **Ref. CA**, pp. 603-604 (emphasis added).
a digital to analog converter coupled to the control input for varying the switching frequency; and	Figure 20 teaches a digital to analog converter (D/A) coupled to the control input (Ramp slope) for varying the switching frequency. 
a counter coupled to the output of the oscillator and to the digital to analog converter, the counter causing the digital to analog converter to adjust the control input and to vary the switching frequency.	Figure 20 teaches a counter (COUNTER) coupled to the output of the oscillator (SIMPLE CONTROL LOGIC) and to the digital to analog converter (D/A), the counter causing the digital to analog converter to adjust the control input (Ramp slope) and to vary the switching frequency (V_{TR}). Figure 19 shows the change in switching frequency.

'876 Patent Claim 1	Anticipated or Rendered Obvious by Wang
	 Wang's use of the ROM element does not prevent it from anticipating claim 1, because the COUNTER is still coupled to the digital to analog converter (D/A, Subperiod Width). The ROM uses the signal from the COUNTER to look up stored digital signal. The ROM has a one-to-one correspondence from input to output. Every time the ROM element receives a given input value, it will produce the same given output value. Alternatively, it would be obvious to one skilled in the art to remove the ROM element from Wang, so that the COUNTER would be directly connected to digital to analog converter (D/A). It would be obvious to do this because the ROM element is not necessary for the Wang circuit to vary the frequency. The ROM element merely adds a level of complexity to the circuit claimed in claim 1 of the '876 patent. While removing the ROM element would simplify the circuit, the simplified circuit would still vary the frequency.

V. CONSTRUCTION OF CLAIM TERMS IN THE '876 PATENT

The '876 patent and three other patents are currently the subject of litigation in the United States District Court for the District of Delaware (Civil Action No. 04-1371-JJF). This action was filed by the assignee of the '876 patent, Power Integrations, Inc., against Fairchild. The parties have set forth their respective positions as to how certain limitations of the referenced

claims of the '876 patent should be construed in claim construction briefs. The Court has considered those positions and issued a Claim Construction Order. A copy of the Claim Construction Order is attached at **Exhibit C**. A copy of the Court's associated Memorandum Opinion is attached at **Exhibit D**.

A. The Court's Constructions are not Binding on the Patent Office

For purposes of examination, including reexamination, the terms of the patent claims must be interpreted. During examination, claims are to be given their "broadest reasonable interpretation." MPEP §2111 (citing *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)). The interpretation must be consistent with the understanding of those of ordinary skill in the relevant art. MPEP, §2111 (citing *In re Cortright*, 165 F.3d 1353, 1359 (Fed. Cir. 1999)).

Because of the different standards employed by the district courts and the Patent Office in construing claims, the Delaware District Court's constructions are in no way binding on the Patent Office. *See* MPEP §2286 and *In re Zletz*, 893 F.2d 319, 322 (Fed. Cir. 1989) (manner of claim interpretation that is used by courts in litigation is not the manner of claim interpretation that is applicable during prosecution of a pending application before the PTO). Accordingly, the Examiner is not bound by the Court's Claim Construction Order.

B. Construction of Specific Terms From the Claims of the '876 Patent

The construction of six limitations of the referenced claims of the '876 patent are important in evaluating the invalidity of the '876 patent: "frequency jittering"; "coupled"; "primary voltage"; "secondary voltage"; "combining"; and "supplemental voltage". The construction of each of these six limitations is considered below.

1. "frequency jittering"

In Claim 1 of the '876 Patent, the term "frequency jittering" appears only in the

preamble, and therefore should not be considered a claim limitation. "The preamble of a claim does not limit the scope of the claim when it merely states a purpose or intended use of the invention." *In re Paulsen*, 30 F.3d 1475, 1479 (Fed. Cir. 1994). Here, Claim 1 of the '876 Patent recites "a digital **frequency jittering** circuit for varying the switching frequency of the power supply...." After stating this intended use, the claim describes the required elements (an oscillator, a digital to analog converter, and a counter). *See* '876 Patent, Claim 1. At no time, however, does the body of the claim refer to the "frequency jitter circuit" mentioned in the preamble. Since the preamble does not give "life, meaning or vitality" to the claim, it is not a limitation and need not be construed. *See Intirtool, Ltd. v. Texar Corp.*, 369 F.3d 1289, 1296 (Fed. Cir. 2004).

If "frequency jittering" does need to be construed, however, it should be construed as "varying the frequency of operation of the pulse width modulated switch by varying the oscillation frequency of the oscillator." The '876 specification incorporates by reference the specification of Power Integrations' U.S. Patent No. 6,107,851 ("the '851 patent"). **Exhibit F**, 6:6-12. The term "frequency jitter" is expressly defined in the specification of the '851 Patent:

> Varying the frequency of operation of the pulse width modulated switch by varying the oscillation frequency of the oscillator is referred to as frequency jitter.

'851 Patent, 3:28-30. Because the specification of the '851 patent is incorporated by reference into the specification of the '876 patent, the definition of "frequency jitter" is part of the intrinsic evidence. *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316 (Fed. Cir. 2001) ("When a document is 'incorporated by reference' into a host document, such as a patent, the referenced document becomes effectively part of the host document as if it were explicitly contained therein."). Thus, "frequency jittering" should mean "varying the frequency of operation of the pulse width modulated switch by varying the oscillation frequency of the oscillator."

The Court construed "frequency jittering" to mean "varying the switching frequency of a switch mode power supply about a target frequency in order to reduce electromagnetic

interference." Ex. C. While varying the switching frequency around a target frequency may be a characteristic of the preferred embodiment, the Court's definition of "frequency jittering" is narrower than what is required by MPEP §2111.

2. "coupled"

The term "coupled" is found in Claims 1, 3, 5, 7, 21-24, 26-28, 30-32. Two circuits are "coupled" when they are configured such that "signals pass from one to the other." This is the ordinary meaning of the term and is supported by the intrinsic evidence. The '876 patent refers to elements that are "magnetically coupled" and does not require a direct connection between circuit elements. Ex. A, 8:5-7 ("A secondary winding 922 is **magnetically coupled** in series **across a primary winding of a transformer 920**."). Thus, circuit elements can be coupled together even if there are additional, intermediary elements so long as signals pass from one to the other.

The Court construed "coupled" as follows: "two circuits are coupled when they are connected such that voltage, current or control signals pass from one to another." Ex. C. This definition adds limitations from the preferred embodiment that make the Court's construction narrower than what is required by MPEP §2111. Importantly, the Court noted that its construction of "coupled" does not require that two circuit elements be directly connected. "However, the Court's construction of the term 'coupled' should not be read to imply or necessitate a direct connection, as ***the Court does not read the patent to require a direct connection or to preclude the use of intermediate circuit elements***." Ex. D. Thus, even under the Court's construction, circuit elements can be coupled together even if there are additional, intermediary circuit elements.

3. "primary voltage"

The Court's construction of "primary voltage" is "base or initial voltage." Ex. C.

4. "secondary voltage"

The Court construed "secondary voltage" as "a subsequent or additional voltage". **Ex. C.**

5. "combining"

The Court construed "combining" to mean "adding together." **Ex. C.**

6. "supplemental voltage"

The Court construed "supplemental voltage" to mean "a voltage in addition to the primary voltage." **Ex. C.**

VI. STATEMENT OF COMPLIANCE WITH 37 C.F.R. § 1.510(b)(5)

Fairchild certifies that, pursuant to 37 C.F.R. 1.510(b)(5), it has served a copy of this request by mailing such copy Express Mail postage prepaid to the attorney of record for the patentee at the following address, which is the current address obtained from the PTO attorney database:

BLAKELEY, SOKOLOFF, TAYLOR, ZAFMAN LLP.
12400 Wilshire Boulevard, Seventh Floor
Los Angeles, CA 90025

A courtesy copy of this request was also served on litigation counsel for Power Integrations by mailing such copy Express Mail postage prepaid to the following address:

Frank E. Scherkenbach
FISH & RICHARDSON, P.C.
225 Franklin Street
Boston, MA 02110-2804

VII. CONCLUSION

The Requestor believes that the above analysis indicates that the prior art attached hereto which was not considered previously by the Examiner, invalidates Claims 1, 17, 18, and 19 of

the '876 patent under 35 U.S.C. § 102 or § 103. At a minimum, it is believed that Martin, Habetler, and Wang raise a substantial new question of patentability, thereby justifying commencement of an *ex parte* reexamination proceeding. Accordingly, the Requestor respectfully requests that the Commissioner establish a reexamination proceeding and give due consideration to the prior art and admissions discussed above.

Dated: November 9, 2006

Respectfully submitted,

Sanjeet K. Dutta
Reg. No. 46,145

OHS West:260080321.10

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

POWER INTEGRATIONS, INC., a Delaware corporation,

Plaintiff,

v.

FAIRCHILD SEMICONDUCTOR INTERNATIONAL, INC., a Delaware corporation, and FAIRCHILD SEMICONDUCTOR CORPORATION, a Delaware corporation,

Defendants.

C.A. No. 04-1371

CERTIFICATE OF SERVICE

I, Rita Hernandez, hereby certify that on November 9, 2006, true and correct copies of the following document were served on the following counsel of record at the addresses and in the manner indicated:

1. **REQUEST FOR EX PARTE REEXAMINATION TRANSMITTAL FORM 1465**
2. **PTO-1449 AND REFERENCES CITED THEREON**
3. **REQUEST FOR EX PARTE REEXAMINATION OF U.S. PATENT NO. 6,249,876 ATTACHMENT TO FORM 1465**
4. **CERTIFICATE OF SERVICE**

I hereby certify that the attached associated documents are being deposited with the United States Postal Service on this date in an envelope as "Express Mail Post Office to Addressee" addressed to the following:

Blakeley, Sokoloff, Taylor, Zafman LLP
12400 Wilshire Boulevard,
Seventh Floor
Los Angeles, CA 90025

Frank E. Scherkenbach
Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804

Date of Mailing: November 9, 2006

Rita Hernandez

EXHIBIT 3

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/008,324	11/09/2006	6107851	10414-25	6695

7590 12/19/2006

BRADLEY J. BEREZNAK, EQS.
BLAKELEY ,SOKOLOFF ,TAYLOR ,ZAFMAN LLP.
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 12/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

12/19/06

THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS

SANJEET K. DUTTA
ORRICK,HERRINGTON & SUTCLIFFE LLP
1000 MARSH ROAD
MENLO PARK, CA 94025

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO 90/008324
PATENT NO. 6,107,851
ART UNI 3992

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified ex parte reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the ex parte reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Order Granting / Denying Request For Ex Parte Reexamination	Control No. 90/008,324	Patent Under Reexamination 6107851	
	Examiner Margaret Rubin	Art Unit 3992	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The request for *ex parte* reexamination filed *09 November 2006* has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a)☐ PTO-892, b)☒ PTO/SB/08, c)☐ Other: _____

1. ☒ The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

2. ☐ The request for *ex parte* reexamination is DENIED.

This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). **EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.**

In due course, a refund under 37 CFR 1.26 (c) will be made to requester:

a) ☐ by Treasury check or,

b) ☐ by credit to Deposit Account No. _____, or

c) ☐ by credit to a credit card account, unless otherwise notified (35 U.S.C. 303(c)).

Margaret Rubin
Primary Examiner
Art Unit: 3992

cc:Requester (if third party requester)

DECISION GRANTING *EX PARTE* REEXAMINATION

Information Submissions

Information Submissions in *Ex Parte* Proceedings are bound by 37 CFR § 1.555 which incorporates 37 CFR § 1.98(a). Establishing a publication date for non-patent literature is among the requirements of 37 CFR § 1.98(a). Insofar as Requester has not provided the same for citation CE, this reference has not been considered and has been lined through on the information disclosure statement. Furthermore, it appears as if Requester made a typographical error in transcribing the title of citation CB and page numbers were not supplied for citations CC and CD. Corrections have been made by the Office on PTO form 1449.

Summary

Substantial new questions of patentability affecting claims 1, 2, 4, 7, 9, 10, 11, 13, 16 and 17 of United States Patent No.

6,107,851 (hereafter "the base patent") are raised by the following references[1]:

[1] An SNQ is not raised by LM3101 Secondary-Side PWM Controller; National Semiconductor, cite "CE" of the IDS, because Requester has not established that a publication date for the document. Thus, whether it qualifies as prior art under 35 USC 102 is unknown.

1.) SGS-Thomson TEA 2262 Datasheet, "Switch Mode Power Supply Controller", pp 1-9, (April 1996) (hereafter, "TEA 2262");

2.) SGS-Thomson TEA 2260/TEA2261, Datasheet Application Note 376, "High Performance Driver Circuits for S.M.P.S." pp. 1-33 (June 1994) (hereafter, "TEA 2260/2261");

3.) PWM Power Supply IC; 85-265 VAC Input Isolated, Regulated DC Output, Power Integrations SMP211 Datasheet (January 1996) (hereafter, "SMP 211");

4.) U.S. Patent No. 4,638,417 to Martin;

5.) "Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters"; IEEE Transactions on Power Electronics, Vol. 8, No.4 (October 1993) by A.C. Wang and S.R. Sanders, pp. 596-605 (hereafter "Wang");

6.) U.S. Patent No. 5,498,995 to Szepesi et al., (hereafter "Szepesi); and

7.) "Off-Line Power Integrated Circuit for International Rated 60-watt Power Supplies" by Richard Keller, Applied Power Electronics Conference and Exposition, February 1992 (pp. 505-512) (hereafter, "Keller").

Issues Raised by Requester

Although the merits of the rejections suggested in the request are not decided herein, it is noted that the Requester proposes that the references supplied raise substantial new questions of patentability when viewed in the following manner:

1.) Claims 1, 2, 4, 7, 9, 10, 11, 13, 16 and 17 are rejected under 35 U.S.C. §§102(a)(b) as anticipated by TEA 2262;

2.) Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 are rejected under 35 U.S.C. §§102(a)(b) as anticipated by SMP211 in light of the admitted prior art of the patent;

3.) Claims 1, 2, 7, 9, 10, 11, 16, and 17 are rejected under 35 U.S.C. §§102(a)(b) as anticipated by Martin;

4.) Claims 1, 2, 7, 9, 10, 11, 16, and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin in view of SMP211;

5.) Claims 4 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin in view of Keller;

6.) Claims 1, 2, 7, 9, 10, 11, 16, and 17 are rejected under 35 U.S.C. §§102(a)(b) as anticipated by Wang;

7.) Claims 4 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wang in view of Keller; and

8.) Claims 1, 2, 7, 9, 10, 11, 16, and 17 are rejected under 35 U.S.C. §§102(a)(b) as anticipated by Szepesi.

Background

The base patent issued from United States Patent Application No. 09/080,774 (hereafter "the base application"). Although Office records of the prosecution history of the base application are not currently available and will not be available in a timely manner for purposes of deciding this request, insofar as Requester has provided papers from the prosecution history, they have been reviewed to determine what claim limitations were deemed patentable. It is noted that a statement regarding allowable subject matter dated December 13, 1999 cited "a PWM switch comprising an oscilator [*sic*] for generating a maximum duty cycle signal and a singnal [*sic*] with a frequency range dependent on a frequency variation circuit as recited in claim 1." It is noted that there are two independent claims within the base patent: claims 1 and 11. Neither of them include recitation of a signal with a frequency range dependent on a frequency variation circuit. In addition, claim 11 does not

require a PWM switch. Lastly, from the records supplied by Requester, it appears as if a Statement of Reasons for Allowance was not made when the base application was allowed.

In summary, the prosecution history does not provide a clear record of the reasons the base patent was allowed.

Issues

TEA 2262 and TEA 2260/2261

It is agreed that TEA 2262 and TEA 2260/2261 raise an SNQ for claims 1 and 11. Insofar as Requester has grouped these references together for presentation, they have been evaluated together herein. (That said, these references could not fairly be treated as a single publication for purposes of making a rejection under 35 USC 102 as suggested by Requester.) More particularly, Requester has provided plausible item-matching for a number of limitations of claims 1 and 11 on pages 10-15 and 20-26, respectively, of the request. In view of the fact that the prosecution history does not provide a clear record of the reasons the base patent was allowed, the teachings presented in the request cannot be judged as merely cumulative. By raising an SNQ with regard to the independent claims, an SNQ is also raised

for the dependent claims 2, 4, 7, 9, 10, 13, 16 and 17 which come freighted with the limitations of the claims from which they stem.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

SMP211

It is agreed that SMP 211 raises an SNQ for claims 1 and 11. More particularly, Requester has provided plausible item-matching for a number of limitations of claims 1 and 11 on pages 31-34 and 39-42, respectively, of the request. In view of the fact that the prosecution history does not provide a clear record of the reasons the base patent was allowed, the teachings presented in the request cannot be judged as merely cumulative. By raising an SNQ with regard to the independent claims, an SNQ is also raised for claims 2, 4, 7, 9, 10, 11, 13, 16 and 17 which come freighted with the limitations of the claims from which they stem.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

Martin

It is agreed that Martin raises an SNQ for claims 1 and 11. More particularly, Requester has provided plausible item-matching for a number of limitations of claims 1 and 11 on pages 46-49 and 55-59, respectively, of the request. In view of the fact that the prosecution history does not provide a clear record of the reasons the base patent was allowed, the teachings presented in the request cannot be judged as merely cumulative. By raising an SNQ with regard to the independent claims, an SNQ is also raised for claims 2, 4, 7, 9, 10, 13, 16 and 17 which come freighted with the limitations of the claims from which they stem.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination

and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

Keller

It is agreed that Keller raises an SNQ for claims 4 and 13. More particularly, Requester has provided plausible item-matching for a number of limitations of claims 4 and 13 at least on pages 50-51 and 59-60, respectively, of the request. In view of the fact that the prosecution history does not provide a clear record of the reasons the base patent was allowed, the teachings presented in the request cannot be judged as merely cumulative.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

Wang

It is agreed that Wang raises an SNQ for claims 1 and 11. More particularly, Requester has provided plausible item-

matching for a number of limitations of claims 1 and 11 on pages 67-70 and 75-79, respectively, of the request. In view of the fact that the prosecution history does not provide a clear record of the reasons the base patent was allowed, the teachings presented in the request cannot be judged as merely cumulative. By raising an SNQ with regard to the independent claims, an SNQ is also raised for claims 2, 4, 7, 9, 10, 11, 13, 16 and 17 which come freighted with the limitations of the claims from which they stem.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

Szepesi

It is agreed that Szepesi raises an SNQ for claims 1 and 11. More particularly, Requester has provided plausible item-matching for a number of limitations of claims 1 and 11 on pages 84-89 and 94-100, respectively, of the request. In view of the fact that the prosecution history does not provide a clear record of the reasons the base patent was allowed, the teachings

presented in the request cannot be judged as merely cumulative. By raising an SNQ with regard to the independent claims, an SNQ is also raised for claims 2, 4, 7, 9, 10, 11, 13, 16 and 17 which come freighted with the limitations of the claims from which they stem.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

Conclusion

Since Requester did not request reexamination of claims 3, 5, 6, 8, 12, 14, 15 and 18 and did not assert the existence of a substantial new question of patentability (SNQ) for such claims, these claims will not be reexamined unless at the discretion of the Office.

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires

that *ex parte* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No 6,107,851 throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Please mail any communications to:

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Central Reexamination Unit
Commissioner for Patents
P. O. Box 1450
Alexandria VA 22313-1450

Please FAX any communications to:
(571) 273-9900
Central Reexamination Unit

Please hand-deliver any communications to:

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Attn: Central Reexamination Unit
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401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Margaret Rubin
Primary Examiner
Central Reexamination Unit 3992
(571) 272-1756

conferees:

Please type a plus sign (+) in this box [+]

PTO/SB/08A (10-96)

Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Patent Number	6,107,851
Issue Date	June 19, 2001
First Named Inventor	Balu Balakirshnan
Group Art Unit	3992
Examiner Name	Rubin
Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.[1]	U.S. Patent Document Number	Kind Code[2]	Name of Patentee or Applicant of Cited Document	Date of Patent of Cited Documents MM-DD-YYYY
MR	AA	4,638,417		Hubert C. Martin, Jr. ,et al.	January 20, 1987
MR	AB	5,498,995		Thomas Szepesi	March 12, 1996

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5]	Name of Patentee or Applicant of Cited Document	Date of Publications of Cited Documents MM-DD-YYYY	T[6]
	BA						

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
MR	CA	SGS-Thomson Microelectronics TEA 2262; Switch Mode Power Supply Controller; pages 1-9; April 1996	
MR	CB	SGS-Thomson Microelecronics TEA ~~2262~~ 2260 TEA2261; High Performance Driver Circuits for S.M.P.S; pages 1-33; June 1994	
MR	CC	PWM Power Supply IC; 85-265 VAC Input Isolated, Regulated DC Output; Power Integrations SMP211 Datasheet (January 1996) ("SMP 211") pp 2-46 to 2-58 and pp 5-1 to 5-6	
MR	CD	"Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters; IEEE Transactions on Power Electronics, Vol. 8, No. 4 (Oct 1993) A.C. Wang, S.R. Sanders pp 596-605	
	CE	~~LM3101 Secondary-Side PWM Controller; National Semiconductor; Szepesi~~	
MR	CF	Off-Line Power Integrated Circuit For International Rated 60 Watt Power Supplies; Richard Keller, Power Integrations Inc. Page 505-512, IEEE 1992	

Examiner Signature	OHS West:260122431.1	Date Considered	12/8/06

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent documents. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

EXHIBIT 4

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/008,326	11/09/2006	6249876	10414-25	7651

7590 12/21/2006

Bradley J. Bereznak, Esq.
BLAKELY SOKOLOFF TAYLOR & ZAFMAN. LLP
12400 Wilshire Blvd.
Seventh Floor
Los Angeles, CA 90025

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 12/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Order Granting / Denying Request For Ex Parte Reexamination	Control No.	Patent Under Reexamination	
	90/008,326	6249876	
	Examiner	Art Unit	
	Margaret Rubin	3992	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The request for *ex parte* reexamination filed *09 November 2006* has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a)☐ PTO-892, b)☒ PTO/SB/08, c)☐ Other: _____

1. ☒ The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

2. ☐ The request for *ex parte* reexamination is DENIED.

This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). **EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.**

In due course, a refund under 37 CFR 1.26 (c) will be made to requester:

a) ☐ by Treasury check or,

b) ☐ by credit to Deposit Account No. _____, or

c) ☐ by credit to a credit card account, unless otherwise notified (35 U.S.C. 303(c)).

Margaret Rubin
Primary Examiner
Art Unit: 3992

cc:Requester (if third party requester)

DECISION GRANTING *EX PARTE* REEXAMINATION

Summary

Substantial new questions of patentability affecting claims 1 and 17-19 of United States Patent No. 6,249,876 (hereafter "the base patent") are raised by the following references:

1.) Acoustic Noise Reduction in Sinusoidal PWM Drives Using A Randomly Modulated Carrier", IEEE Transactions on Power Electronics, Vol. 6, No. 3, p.356-363 (published July 1991) by T.G. Habetler and D. M. Divan (hereafter "Habetler");

2.) U.S. Patent No. 4,638,417 to Martin; and

3.) "Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters"; IEEE Transactions on Power Electronics, Vol. 8, No.4 (October 1993) by A.C. Wang and S.R. Sanders, pp. 596-605 (hereafter "Wang").

Issues Raised by Requester

Although the merits of the rejections suggested in the request are not decided herein, it is noted that the Requester proposes that the references supplied raise substantial new questions of patentability when viewed in the following manner:

1.) Claim 1 is anticipated by Martin;

2.) Claims 1, 17, 18, and 19 are anticipated by Habetler; and

3.) Claim 1 is anticipated by Wang.

Background

The base patent issued from United States Patent Application No. 09/192,959 (hereafter "the base application"). It is noted that the non-final rejection dated October 16, 2000 states that claims 1-10 included allowable subject matter but reasons therefor were not provided. Further, the Notice of Allowance mailed January 20, 2001 did not include a Statement of Reasons for Allowance.

In summary, the prosecution history does not provide a clear record of the reasons the base patent was allowed.

Issues

Martin

It is agreed that Martin raises an SNQ for claim 1. More particularly, Requester has provided plausible item-matching for a number of limitations of claim 1 on pages 7-10 of the request. In view of the fact that the prosecution history does not provide a clear record of the reasons the base patent was allowed, the teachings presented in the request cannot be judged as merely cumulative.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

Wang

It is agreed that Wang raises an SNQ for claim 1. More particularly, Requester has provided plausible item-matching for a number of limitations of claim 1 on pages 21-23 of the request. In view of the fact that the prosecution history does

not provide a clear record of the reasons the base patent was allowed, the teachings presented in the request cannot be judged as merely cumulative.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

Habetler

It is agreed that Habetler raises an SNQ for claim 1, 17, 18, and 19. More particularly, Requester has provided plausible item-matching for a number of limitations of claim 1 and 17 on pages 12-16 of the request. In view of the fact that the prosecution history does not provide a clear record of the reasons the base patent was allowed, the teachings presented in the request cannot be judged as merely cumulative. By raising an SNQ with regard to independent claim 17, an SNQ is also raised for the dependent claims 18-19 which come freighted with the limitations of the claim from which they stem.

Such teachings are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination and the same question of patentability was not the subject of a final holding of invalidity by Federal Courts.

Conclusion

Since Requester did not request reexamination of claims 2-16 and 20-32 and did not assert the existence of a substantial new question of patentability (SNQ) for such claims, these claims will not be reexamined unless at the discretion of the Office.

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No 6,249,876 throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

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Central Reexamination Unit
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(571) 273-9900
Central Reexamination Unit

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401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Margaret Rubin
Primary Examiner
Central Reexamination Unit 3992
(571) 272-1756

conferees:

Please type a plus sign (+) in this box ☐☒

71338 U.S. PTO

PTO/SB/08A (10-96)
Approved for use through 10/31/98. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449A/PTO

11/09/06

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	11/09/06
Patent Number	6,249,876
Issue Date	June 19, 2001
First Named Inventor	Balu Balakirshnan
Group Art Unit	3992
Examiner Name	Rubin
Attorney Docket Number	10414-25

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.[1]	U.S. Patent Document Number	Kind Code[2]	Name of Patentee or Applicant of Cited Document	Date of Patent of Cited Documents MM-DD-YYYY
MR	AA	4,638,417		Hubert C. Martin, Jr. ,et al.	January 20, 1987
	AB				

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5]	Name of Patentee or Applicant of Cited Document	Date of Publications of Cited Documents MM-DD-YYYY	T[6]
	BA						

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
MR	CA	Programmed Pulsewidth Modulated Waveforms For Electromagnetic Interference Mitigation In DC-DC Converters", IEEE Transactions on Power Electronics, Vol. 8, No. 4 (published October 1993) by A.C. Wang and S. R. Sanders ("Wang and Sanders") pages 596 - 605	
MR	CB	Acoustic Noise Reduction In Sinusoidal PWM Drives Using A Randomly Modulated Carrier", IEEE Transactions on Power Electronics, Vol. 6, No. 3, p. 356 (published July 1991) by T.G. Habetler and D.M. Divan ("Habetler and Divan") through p.363	
	CC		

Examiner Signature	MR	Date Considered	12/18/06

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent documents. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

EXHIBIT 5

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/008,324	11/09/2006	6107851	10414-25	6695

7590 04/07/2008

BRADLEY J. BEREZNAK, EQS.
BLAKELEY ,SOKOLOFF ,TAYLOR ,ZAFMAN LLP.
12400 WILSHIRE BOULEVARD
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LOS ANGELES, CA 90025

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 04/07/2008

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United States Patents and Trademark Office
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www.uspto.gov

THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS

SANJEET K. DUTTA
ORRICK,HERRINGTON & SUTCLIFFE LLP
1000 MARSH ROAD
MENLO PARK, CA 94025

Date:

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. : 90008324
PATENT NO. : 6107851
ART UNIT : 3900

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified ex parte reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the ex parte reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Office Action in Ex Parte Reexamination	Control No. 90/008,324	Patent Under Reexamination 6107851	
	Examiner Christopher E. Lee	Art Unit 3992	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

a☐ Responsive to the communication(s) filed on _____. b☐ This action is made FINAL.
c☒ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter. Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).** If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892.
2. ☒ Information Disclosure Statement, PTO/SB/08.
3. ☐ Interview Summary, PTO-474.
4. ☐ _____.

Part II SUMMARY OF ACTION

1a. ☒ Claims *1,2,4,7,9-11,13,16 and 17* are subject to reexamination.
1b. ☐ Claims *3,5,6,8,12,14,15 and 18* are not subject to reexamination.
2. ☐ Claims _____ have been canceled in the present reexamination proceeding.
3. ☐ Claims _____ are patentable and/or confirmed.
4. ☐ Claims *1,2,4,7,9-11,13,16 and 17* are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ The drawings, filed on _____ are acceptable.
7. ☐ The proposed drawing correction, filed on _____ has been (7a)☐ approved (7b)☐ disapproved.
8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All b)☐ Some* c)☐ None of the certified copies have
   1☐ been received.
   2☐ not been received.
   3☐ been filed in Application No. _____.
   4☐ been filed in reexamination Control No. _____.
   5☐ been received by the International Bureau in PCT application No. _____.
   * See the attached detailed Office action for a list of the certified copies not received.
9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.
10. ☐ Other: _____

cc: Requester (if third party requester)

***Ex Parte* Reexamination**

1. This is an *Ex Parte* Reexamination of US 6,107,851 A (hereinafter "the '851 patent"). Currently, claims 1, 2, 4, 7, 9-11, 13, 16, and 17 are pending in this *Ex Parte* Reexamination. The claims 3, 5, 6, 8, 12, 14, 15, and 18 are not subject to reexamination.

Information Disclosure Statement

2. The Information Disclosure Statement filed on 26th of October 2007 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because (1) the references without providing publisher, and/or the references without providing proper page numbers fail to comply with 37 CFR 1.98(b)(5), which requires a publisher, and properly referred pages, and/or (2) the inclusion of the court proceedings as the references in the Information Disclosure Statement. The court proceedings listed in the Information Disclosure Statement have been given due consideration, however, as these are not printed publications per se. The listings on the Information Disclosure Statement have been lined through and these listings will not appear on the Reexamination Certificate.

The *Ex Parte* Reexamination Requester is advised that the date of any re-submission of any item of information contained in the Information Disclosure Statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statements, including all certification requirements for statements under 37 CFR 1.97(e), respectively. See MPEP § 609.05(a).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by SGS-Thomson TEA 2262 [SGS-Thomson TEA 2262 Datasheet, published by SGS-Thomson Microelectronics, April 1996; hereinafter "TEA2262"].

Referring to claim 1, TEA2262 discloses a pulse width modulated switch (i.e., Secondary Regulation in Fig. 2 on page 5; in fact, the component TEA2262 is a switching mode power supply controller using a PWM generator; See page 1) comprising:

- a first terminal (i.e., Drain of the single gate Metal Oxide external transistor in Fig. 2);
- a second terminal (i.e., Source of the single gate Metal Oxide external transistor in Fig. 2);
- a switch (i.e., single gate Metal Oxide external transistor in Fig. 2) comprising
  - a control input (i.e., Gate of said single gate Metal Oxide external transistor in Fig. 2),
  - said switch (i.e., said single gate Metal Oxide external transistor) allowing a signal to be transmitted between said first terminal and said second terminal (i.e., signal from said terminal of the primary winding of the transformer in Fig. 2) according to a drive signal provided at said control input (i.e., a gate driving signal for said Gate control in Fig. 2);
- a frequency variation circuit (i.e., Soft-Start circuit and soft-start capacity C_1 on pin 9 in Block Diagram on page 2) that provides a frequency variation signal (i.e., providing frequency variation signal between f/4 and f, which depends upon the discharging of said soft-start capacity C_1 in Block Diagram on page 2; See page 6);

- an oscillator (i.e., Oscillator in Block Diagram on page 2) that provides an oscillation signal (i.e., sawtooth signal from said Oscillator in Block Diagram on page 2) having a frequency range (i.e., range between f/4 and f; See page 6),
    - said frequency of said oscillation signal varying within said frequency range (i.e., said range between f/4 and f) according to said frequency variation signal (See page 6, wherein the frequency variation signal modulates the frequency of the oscillation signal within a predetermined range of the oscillator's typical operating frequency (f) and 25% of its typical operating frequency (f/4).),
    - said oscillator (i.e., said Oscillator in Block Diagram on page 2) further providing a maximum duty cycle signal (i.e., squarewave pulse signal from said Oscillator in Block Diagram on page 2) comprising
        - a first state (i.e., on-state) and
        - a second state (off-state; See squarewave pulse signal in Block Diagram on page 2); and
- a drive circuit (i.e., Modulator Logic, IS Logic, Logic Processor, and Positive/Negative Output Stages in Block Diagram on page 2) that provides said drive signal when said maximum duty cycle signal is in said first state (i.e., said drive circuit providing the drive signal according to the maximum duty cycle signal shown on the Block Diagram on page 2 as the squarewave out of the oscillator.) and a magnitude of said oscillation signal is below a variable threshold level (i.e., as shown on the Block Diagram on page 2, the comparator labeled "modulators" comparing the oscillator sawtooth signal to a variable threshold level, error amplifier output (S), in order to set the duty cycle of the drive signal.).

Referring to claim 2, TEA2262 teaches

- said first terminal (i.e., Drain of the single gate Metal Oxide external transistor in Fig. 2), said second terminal (i.e., Source of the single gate Metal Oxide external transistor in Fig. 2), said switch (i.e., single gate Metal Oxide external transistor in Fig. 2), said oscillator (i.e., Oscillator in Block Diagram on page 2), said frequency variation circuit (i.e., Soft-Start circuit and soft-start capacity C_1 on pin 9 in Block Diagram on page 2) and said drive circuit (i.e., Modulator Logic, IS Logic, Logic Processor, and Positive/Negative Output Stages in Block Diagram on page 2) comprising a monolithic device (i.e., monolithic integrated circuit; See DESCRIPTION on page 1).

Referring to claim 4, TEA2262 teaches

- a soft start circuit (i.e., Soft-Start circuit in Block Diagram on page 2) that provides a signal (i.e., output signal from said Soft-Start circuit in Block Diagram on page 2) instructing said drive circuit to discontinue said drive signal when said magnitude of said oscillation signal is greater than a magnitude of said frequency variation signal (i.e., by comparing the soft-start signal with respect to the sawtooth signal out of Oscillator, the drive signal's duty cycle is adjusted with respect to the frequency variation signal; See page 2).

Referring to claim 7, TEA2262 teaches

- said frequency of said oscillation signal (i.e., the frequency of oscillation signal from Oscillator in Block Diagram on page 2) varies within said frequency range (i.e., range between f/4 and f) with a magnitude of said frequency variation signal (See page 6, wherein the frequency variation signal modulates the frequency of the oscillation signal

within a predetermined range of the oscillator's typical operating frequency (f) and 25% of its typical operating frequency (f/4) as determined by measuring the magnitude of the voltage on pin 9 of Block Diagram on page 2.).

Referring to claim 9, TEA2262 teaches a rectifier (i.e., Rectifier in Fig. 2) comprising

- a rectifier input (i.e., AC Mains Input in Fig. 2) and
- a rectifier output (i.e., Rectifier Output to Primary winding of Transformer in Fig. 2),
    - said rectifier input (i.e., said AC Mains Input) receiving an AC mains signal (i.e., AC input to be rectified by said Rectifier in Fig. 2) and
    - said rectifier output (i.e., said Rectifier Output) providing a rectified signal (i.e., rectified signal with AC ripples);
- a power supply capacitor (i.e., capacitor coupled to said Rectifier in Fig. 2) that receives said rectified signal (i.e., said rectified signal with AC ripples) and provides a substantially DC signal (i.e., smooth DC signal on the line, which is connected to the left-top primary winding of Transformer in Fig. 2);
- a first winding (i.e., left-top primary winding of Transformer in Fig. 2) comprising a first terminal (i.e., top terminal of said left-top primary winding of Transformer in Fig. 2) and a second terminal (i.e., bottom terminal of said left-top primary winding of Transformer in Fig. 2),
    - said first winding (i.e., said left-top primary winding of said Transformer) receiving said substantially DC signal (i.e., receiving said smooth DC signal),
    - said second terminal of said first winding (i.e., said bottom terminal of said left-top primary winding of said Transformer) coupled to said first terminal of said

switch (i.e., said bottom terminal being coupled to Drain of the single gate Metal Oxide external transistor in Fig. 2); and

- a second winding (i.e., right-top secondary winding of said Transformer in Fig. 2) magnetically coupled to said first winding (See circuit diagram in Fig. 2).

Referring to claim 10, TEA2262 teaches

- said variable threshold level is a function of a feedback signal (i.e., feedback signal from opto-coupler to TEA2262 in Fig. 2) received at a feedback terminal of said pulse width modulated switch (i.e., error amplifier input at pin 6 of Block Diagram on page 2; in fact, the Block Diagram on page 2 shows that said feedback signal, which connects to the input of the error amplifier at pin 6, sets the variable threshold input to the Modulator Logic).

Referring to claim 11, TEA2262 discloses a regulation circuit (i.e., Secondary Regulation in Fig. 2 on page 5) comprising:

- a first terminal (i.e., Drain of the single gate Metal Oxide external transistor in Fig. 2);
- a second terminal (i.e., Source of the single gate Metal Oxide external transistor in Fig. 2);
- a feedback terminal (i.e., error amplifier input at pin 6 of Block Diagram on page 2) coupled to disable the regulation circuit (in fact, the Block Diagram on page 2 shows that feedback signal from opto-coupler to TEA2262, which actually connects to the input of the error amplifier at pin 6, disables TEA2262, actually, said Secondary Regulation; See page 6);
- a switch (i.e., single gate Metal Oxide external transistor in Fig. 2) comprising

- a control input (i.e., Gate of said single gate Metal Oxide external transistor in Fig. 2),
- said switch (i.e., said single gate Metal Oxide external transistor) allowing a signal to be transmitted between said first terminal and said second terminal (i.e., signal from said terminal of the primary winding of the transformer in Fig. 2) according to a drive signal provided at said control input (i.e., a gate driving signal for said Gate control in Fig. 2);

- a frequency variation circuit (i.e., Soft-Start circuit and soft-start capacity C_1 on pin 9 in Block Diagram on page 2) that provides a frequency variation signal (i.e., providing frequency variation signal between f/4 and f, which depends upon the discharging of said soft-start capacity C_1 in Block Diagram on page 2; See page 6);
- an oscillator (i.e., Oscillator in Block Diagram on page 2) that provides an oscillation signal (i.e., sawtooth signal from said Oscillator in Block Diagram on page 2) having a frequency range (i.e., range between f/4 and f; See page 6),
  - said frequency of said oscillation signal varying within said frequency range (i.e., said range between f/4 and f) according to said frequency variation signal (See page 6, wherein the frequency variation signal modulates the frequency of the oscillation signal within a predetermined range of the oscillator's typical operating frequency (f) and 25% of its typical operating frequency (f/4).),
  - said oscillator (i.e., said Oscillator in Block Diagram on page 2) further providing a maximum duty cycle signal (i.e., squarewave pulse signal from said Oscillator in Block Diagram on page 2) comprising
    - a first state (i.e., on-state) and

- a second state (off-state; See squarewave pulse signal in Block Diagram on page 2); and

- a drive circuit (i.e., Modulator Logic, IS Logic, Logic Processor, and Positive/Negative Output Stages in Block Diagram on page 2) that provides said drive signal when said maximum duty cycle signal is in said first state and said regulation circuit is not disabled (i.e., said drive circuit providing the drive signal according to the maximum duty cycle signal shown on the Block Diagram on page 2 as the squarewave out of the oscillator during non-error opto-coupler feedback signal, and furthermore, the comparator labeled "Modulators" on the Block Diagram on page 2 compares the Oscillator sawtooth signal to a variable threshold level, error amplifier output (S), in order to set the duty cycle of the drive signal).

Referring to claim 13, TEA2262 teaches

- a soft start circuit (i.e., Soft-Start circuit in Block Diagram on page 2) that provides a signal (i.e., output signal from said Soft-Start circuit in Block Diagram on page 2) instructing said drive circuit to discontinue said drive signal according to a magnitude of said frequency variation signal (i.e., by comparing the soft-start signal with respect to the sawtooth signal out of Oscillator, the drive signal's duty cycle is adjusted with respect to the frequency variation signal; See page 2).

Referring to claim 16, TEA2262 teaches

- said first terminal (i.e., Drain of the single gate Metal Oxide external transistor in Fig. 2), said second terminal (i.e., Source of the single gate Metal Oxide external transistor in Fig. 2), said switch (i.e., single gate Metal Oxide external transistor in Fig. 2), said

frequency variation circuit (i.e., Soft-Start circuit and soft-start capacity C_t on pin 9 in Block Diagram on page 2) and said drive circuit (i.e., Modulator Logic, IS Logic, Logic Processor, and Positive/Negative Output Stages in Block Diagram on page 2) comprising a monolithic device (i.e., monolithic integrated circuit; See DESCRIPTION on page 1).

Referring to claim 17, TEA2262 teaches a rectifier (i.e., Rectifier in Fig. 2) comprising

- a rectifier input (i.e., AC Mains Input in Fig. 2) and
- a rectifier output (i.e., Rectifier Output to Primary winding of Transformer in Fig. 2),
    - said rectifier input (i.e., said AC Mains Input) receiving an AC mains signal (i.e., AC input to be rectified by said Rectifier in Fig. 2) and
    - said rectifier output (i.e., said Rectifier Output) providing a rectified signal (i.e., rectified signal with AC ripples);
- a power supply capacitor (i.e., capacitor coupled to said Rectifier in Fig. 2) that receives said rectified signal (i.e., said rectified signal with AC ripples) and provides a substantially DC signal (i.e., smooth DC signal on the line, which is connected to the left-top primary winding of Transformer in Fig. 2);
- a first winding (i.e., left-top primary winding of Transformer in Fig. 2) comprising a first terminal (i.e., top terminal of said left-top primary winding of Transformer in Fig. 2) and a second terminal (i.e., bottom terminal of said left-top primary winding of Transformer in Fig. 2),
    - said first winding (i.e., said left-top primary winding of said Transformer) receiving said substantially DC signal (i.e., receiving said smooth DC signal),

- said second terminal of said first winding (i.e., said bottom terminal of said left-top primary winding of said Transformer) coupled to said first terminal of said switch (i.e., said bottom terminal being coupled to Drain of the single gate Metal Oxide external transistor in Fig. 2); and

- a second winding (i.e., right-top secondary winding of said Transformer in Fig. 2) magnetically coupled to said first winding (See circuit diagram in Fig. 2).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This patent under reexamination currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Patent Owner is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 2, 7, 9, 10, 11, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Power Integrations SMP211 [Power Integrations SMP211 Datasheet, published by Power Integrations, Inc., January 1996; hereinafter "SMP211"] in view of Patent Owner's Admitted Prior Art [hereinafter "PAPA"].

Referring to claim 1, SMP211 discloses a pulse width modulated switch (i.e., Flyback Power Supply utilizing PWM Power Supply IC SMP211 in Fig. 6) comprising:

- a first terminal (i.e., Drain terminal "DRAIN" of right-most MOSFET switch, hereinafter "MOSFET switch" in Fig. 3);
- a second terminal (i.e., Source terminal "COM" of MOSFET switch in Fig. 3);
- a switch (i.e., MOSFET switch in Fig. 3) comprising
  - a control input (i.e., Gate terminal of MOSFET switch in Fig. 3),
  - said switch (i.e., said MOSFET switch) allowing a signal to be transmitted between said first terminal and said second terminal (i.e., signal between said COM at Source terminal and said DRAIN at Drain terminal in Fig. 3; See said MOSFET switch in Fig. 3) according to a drive signal provided at said control input (i.e., drive signal from Gate Driver in Fig. 3);
- an oscillator (i.e., Oscillator in Fig. 3) that provides an oscillation signal (i.e., sawtooth signal in Fig. 3), said oscillator (i.e., said Oscillator) further providing a maximum duty cycle signal (i.e., D_{MAX} squarewave signal from said Oscillator in Fig. 3) comprising a first state (i.e., High state of said D_{MAX} squarewave signal) and a second state (i.e., Low state of said D_{MAX} squarewave signal); and
- a drive circuit (i.e., NAND gate and Gate Driver in Fig. 3) that provides said drive signal (i.e., said drive signal from said Gate Driver) when said maximum duty cycle signal (i.e., said D_{MAX} squarewave signal) is in said first state (i.e., said High state; in fact, said Gate Driver being able to be active when said D_{MAX} squarewave signal is in said High state) and a magnitude of said oscillation signal (i.e., said sawtooth signal) is below a variable threshold level (i.e., a PWM comparator "PWM CMP" compares the magnitude of said sawtooth signal out of said Oscillator with the output of the error amplifier "ERROR

AMP", which is the variable threshold, in Fig. 3; See page 2-49, SMP211 Functional Description, col. 1, Pulse Width Modulator).

SMP211 does not expressly teach a frequency variation circuit that provides a frequency variation signal; and said oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal.

PAPA discloses a pulse width modulated switch (i.e., Power Supply utilizing pulse modulated switch, external soft start, and frequency jitter functionality in Fig. 1), wherein

- a frequency variation circuit (i.e., Resistor 140 of Fig. 1) that provides a frequency variation signal (i.e., jitter current 135 of Fig. 1; See col. 3, lines 14-17; wherein in fact that said jitter current is the frequency variation signal, used to vary the frequency of the oscillator inherently anticipates a frequency variation circuit, i.e., said Resistor, that provides a frequency variation signal, i.e., said jitter current).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said frequency variation circuit (i.e., Resistor), as disclosed by PAPA, in said pulse width modulated switch (i.e., Application utilizing PWM Power Supply IC SMP211), as disclosed by SMP211, so as to provide said frequency variation signal (i.e., said jitter current; PAPA) for varying said frequency of said oscillator within frequency range according to said frequency variation signal (i.e., frequency range being determined by the ripple component of substantially DC voltage 15 in Fig. 1; PAPA) for the advantage of allowing the switching frequency of the switch to be spread over a larger bandwidth, which minimizes the peak value of the EMI generated by the power supply at each frequency (See PAPA, col. 3, lines 22-25).

Referring to claim 2, SMP2111 teaches

- said first terminal (i.e., Drain terminal "DRAIN" of MOSFET switch in Fig. 3), said second terminal (i.e., Source terminal "COM" of MOSFET switch in Fig. 3), said switch (i.e., MOSFET switch in Fig. 3), said oscillator (i.e., Oscillator in Fig. 3), and said drive circuit (i.e., NAND gate and Gate Driver in Fig. 3) comprising a monolithic device (i.e., monolithic integrated circuit; See Fig. 2 and page 2-46, Description).

SMP2111, as modified by PAPA, does not teach said frequency variation circuit (i.e., Resistor 140 of Fig. 1; PAPA) being comprised on said monolithic device (i.e., monolithic integrated circuit; SMP211).

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be implemented on said single monolithic device, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art, and furthermore, it is consistent with trends in the semiconductor industry at the time of the invention. See *Howard v. Detroit Stove Works,* 150 U.S. 164 (1893).

Referring to claim 7, SMP2111, as modified by PAPA, teaches

- said frequency of said oscillation signal varying within said frequency range with a magnitude of said frequency variation signal (See PAPA, col. 3, lines 12-17, wherein jitter current, i.e., frequency variation signal, is used to vary the frequency of the saw-toothed waveform generated by the oscillator).

Referring to claim 9, SMP2111 teaches

- a rectifier (i.e., Rectifier "BR1 DF06M" of Fig. 6) comprising

- a rectifier input (i.e., AC Power; See page 2-49, col. 2 of General Circuit Operation) and
- a rectifier output (i.e., rectified AC Power from said Rectifier in Fig. 6),
  - said rectifier input (i.e., said AC Power) receiving an AC mains signal (i.e., 85-265V(rms) AC input voltage; See page 2-49, col. 1 of General Circuit Operation); and
  - said rectifier output (i.e., said rectified AC Power from said Rectifier) providing a rectified signal (i.e., DC with ripples; See page 2-49, col. 2 of General Circuit Operation);

- a power supply capacitor (i.e., C1 "Capacitor 22µF 400V" of Fig. 6) that receives said rectified signal (i.e., said DC with ripples) and provides a substantially DC signal (i.e., filtered and smooth DC signal on the pin 1 of U1 "SMP211BNI" in Fig. 6);
- a first winding (i.e., 32T on T1 "Transformer T1004" in Fig. 6) comprising a first terminal (i.e., Terminal 4 of said T1 in Fig. 6) and a second terminal (i.e., Terminal 6 of said T1 in Fig. 6),
  - said first winding (i.e., said 32T) receiving said substantially DC signal (i.e., said filtered and smooth DC signal),
  - said second terminal of said first winding (i.e., said Terminal 6) coupled to said first terminal of said switch (in fact, said Terminal 6 is connected to the coupled pins 15, 16, which is Drain terminal "DRAIN of MOSFET switch" within said U1 "SMP211BNI" in Fig. 6); and
- a second winding (i.e., 3T on T1 "Transformer T1004" in Fig. 6) magnetically coupled to said first winding (actually, the magnetically coupling between said first winding and said

second winding is a major function of the transformer T1, which is a common sense of one of the ordinary skill in the art; See Figs. 1 and 6).

Referring to claim 10, SMP2111 teaches

- said variable threshold level (i.e., a PWM comparator "PWM CMP" compares the magnitude of said sawtooth signal out of said Oscillator with the output of the error amplifier "ERROR AMP", which is the variable threshold, in Fig. 3; See page 2-49, SMP211 Functional Description, col. 1, Pulse Width Modulator) is a function of a feedback signal (i.e., Optocoupler Feedback; See Fig. 6) received at a feedback terminal of said pulse width modulated switch (i.e., pin 9 "EA IN" and pin 10 "FEEDBACK" on U1 "SMP211BNI" in Fig. 6).

Referring to claim 11, SMP211 discloses a regulation circuit (i.e., Flyback Power Supply utilizing PWM Power Supply IC SMP211 in Fig. 6) comprising:

- a first terminal (i.e., Drain terminal "DRAIN" of right-most MOSFET switch, hereinafter "MOSFET switch" in Fig. 3);
- a second terminal (i.e., Source terminal "COM" of MOSFET switch in Fig. 3);
- a feedback terminal (i.e., Feedback terminal "FEEDBACK" and Error In terminal "EA IN" of MOSFET switch in Fig. 3) coupled to disable the regulation circuit (i.e., said several terminals, "FEEDBACK" and "EA IN", can all disable the regulation circuit, shown in Fig. 3);
- a switch (i.e., MOSFET switch in Fig. 3) comprising
    - a control input (i.e., Gate terminal of MOSFET switch in Fig. 3),

- said switch (i.e., said MOSFET switch) allowing a signal to be transmitted between said first terminal and said second terminal (i.e., signal between said COM at Source terminal and said DRAIN at Drain terminal in Fig. 3; See said MOSFET switch in Fig. 3) according to a drive signal provided at said control input (i.e., drive signal from Gate Driver in Fig. 3);

- an oscillator (i.e., Oscillator in Fig. 3) that provides an oscillation signal (i.e., sawtooth signal in Fig. 3), said oscillator (i.e., said Oscillator) further providing a maximum duty cycle signal (i.e., D_{MAX} squarewave signal from said Oscillator in Fig. 3) comprising a first state (i.e., High state of said D_{MAX} squarewave signal) and a second state (i.e., Low state of said D_{MAX} squarewave signal); and

- a drive circuit (i.e., NAND gate and Gate Driver in Fig. 3) that provides said drive signal (i.e., said drive signal from said Gate Driver) when said maximum duty cycle signal (i.e., said D_{MAX} squarewave signal) is in said first state (i.e., said High state; in fact, said Gate Driver being able to be active when said D_{MAX} squarewave signal is in said High state) and said regulation circuit is not disabled (i.e., said Flyback Power Supply is not in error state after comparing the magnitude of said sawtooth signal out of said Oscillator with the output of the error amplifier "ERROR AMP", which is the variable threshold, in Fig. 3; See page 2-49, SMP211 Functional Description, col. 1, Pulse Width Modulator).

SMP211 does not expressly teach a frequency variation circuit that provides a frequency variation signal; and said oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal.

PAPA discloses a pulse width modulated switch (i.e., Power Supply utilizing pulse modulated switch, external soft start, and frequency jitter functionality in Fig. 1), wherein

- a frequency variation circuit (i.e., Resistor 140 of Fig. 1) that provides a frequency variation signal (i.e., jitter current 135 of Fig. 1; See col. 3, lines 14-17; wherein in fact that said jitter current is the frequency variation signal, used to vary the frequency of the oscillator inherently anticipates a frequency variation circuit, i.e., said Resistor, that provides a frequency variation signal, i.e., said jitter current).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said frequency variation circuit (i.e., Resistor), as disclosed by PAPA, in said pulse width modulated switch (i.e., Application utilizing PWM Power Supply IC SMP211), as disclosed by SMP211, so as to provide said frequency variation signal (i.e., said jitter current; PAPA) for varying said frequency of said oscillator within frequency range according to said frequency variation signal (i.e., frequency range being determined by the ripple component of substantially DC voltage 15 in Fig. 1; PAPA) for the advantage of allowing the switching frequency of the switch to be spread over a larger bandwidth, which minimizes the peak value of the EMI generated by the power supply at each frequency (See PAPA, col. 3, lines 22-25).

Referring to claim 16, SMP2111 teaches

- said first terminal (i.e., Drain terminal "DRAIN" of MOSFET switch in Fig. 3), said second terminal (i.e., Source terminal "COM" of MOSFET switch in Fig. 3), said switch (i.e., MOSFET switch in Fig. 3), and said drive circuit (i.e., NAND gate and Gate Driver in Fig. 3) comprising a monolithic device (i.e., monolithic integrated circuit; See Fig. 2 and page 2-46, Description).

SMP2111, as modified by PAPA, does not teach said frequency variation circuit (i.e., Resistor 140 of Fig. 1; PAPA) being comprised on said monolithic device (i.e., monolithic integrated circuit; SMP211).

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be implemented on said single monolithic device, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art, and furthermore, it is consistent with trends in the semiconductor industry at the time of the invention. See *Howard v. Detroit Stove Works,* 150 U.S. 164 (1893).

Referring to claim 17, SMP2111 teaches

- a rectifier (i.e., Rectifier "BR1 DF06M" of Fig. 6) comprising
  - a rectifier input (i.e., AC Power; See page 2-49, col. 2 of General Circuit Operation) and
  - a rectifier output (i.e., rectified AC Power from said Rectifier in Fig. 6),
    - said rectifier input (i.e., said AC Power) receiving an AC mains signal (i.e., 85-265V(rms) AC input voltage; See page 2-49, col. 1 of General Circuit Operation); and
    - said rectifier output (i.e., said rectified AC Power from said Rectifier) providing a rectified signal (i.e., DC with ripples; See page 2-49, col. 2 of General Circuit Operation);
- a power supply capacitor (i.e., C1 "Capacitor 22μF 400V" of Fig. 6) that receives said rectified signal (i.e., said DC with ripples) and provides a substantially DC signal (i.e., filtered and smooth DC signal on the pin 1 of U1 "SMP211BNI" in Fig. 6);

- a first winding (i.e., 32T on T1 "Transformer T1004" in Fig. 6) comprising a first terminal (i.e., Terminal 4 of said T1 in Fig. 6) and a second terminal (i.e., Terminal 6 of said T1 in Fig. 6),
    - said first winding (i.e., said 32T) receiving said substantially DC signal (i.e., said filtered and smooth DC signal),
    - said second terminal of said first winding (i.e., said Terminal 6) coupled to said first terminal of said switch (in fact, said Terminal 6 is connected to the coupled pins 15, 16, which is Drain terminal "DRAIN of MOSFET switch" within said U1 "SMP211BNI" in Fig. 6); and
- a second winding (i.e., 3T on T1 "Transformer T1004" in Fig. 6) magnetically coupled to said first winding (actually, the magnetically coupling between said first winding and said second winding is a major function of the transformer T1, which is a common sense of one of the ordinary skill in the art; See Figs. 1 and 6).

Other References Submitted by the Requester

8. Some of the other references submitted by Requester, for example, Martin Jr. et al. [US 4,638,417], Wang et al. ["Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters," IEEE Transactions on Power Electronics, Vol. 8, No.4 (October 1993)], Szepesi et al. [US 5,498,995 A], and Keller ["Off-Line Power Integrated Circuit for International Rated 60-watt Power Supplies," Applied Power Electronics Conference and Exposition, February 1992], are highly material and relevant because they seem to anticipate at least one of the claims. However, because they do not seem to anticipate or obviate any of the claims not anticipated by the references discussed above, additional rejections based on them would be redundant and unnecessary at this time.

NOTICE RE PATENT OWNER'S CORRESPONDENCE ADDRESS

Effective May 16, 2007, 37 CFR 1.33(c) has been revised to provide that:

The Patent Owner's correspondence address for all communications in an *ex parte* reexamination or an *inter partes* reexamination is designated as the correspondence address of the patent.

Revisions and Technical Corrections Affecting Requirements for *Ex Parte* and *Inter Partes* Reexamination, 72 FR 18892 (April 16, 2007)(Final Rule)

The correspondence address for any pending reexamination proceeding not having the same correspondence address as that of the patent is, by way of this revision to 37 CFR 1.33(c), automatically changed to that of the patent file as of the effective date.

This change is effective for any reexamination proceeding which is pending before the Office as of May 16, 2007, including the present reexamination proceeding, and to any reexamination proceeding which is filed after that date.

Parties are to take this change into account when filing papers, and direct communications accordingly.

In the event the Patent Owner's correspondence address listed in the papers (record) for the present proceeding is different from the correspondence address of the patent, it is strongly encouraged that the patent owner affirmatively file a Notification of Change of Correspondence Address in the reexamination proceeding and/or the patent (depending on which address Patent Owner desires), to conform the address of the proceeding with that of the patent and to clarify the record as to which address should be used for correspondence.

Telephone Numbers for reexamination inquiries:

Reexamination and Amendment Practice	(571) 272-7703
Central Reexam Unit (CRU)	(571) 272-7705
Reexamination Facsimile Transmission No.	(571) 273-9900

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to the Patent Owner's disclosure.

Colton [US 4,481,565] discloses core reset for single-ended DC-to-DC converter.

10. The Patent Owner is reminded that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j).

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116, after final rejection and 37 CFR 41.33 after appeal, which will be strictly enforced.

After filing of a request for *ex parte* reexamination by a Third Party requester, any document filed by either the Patent Owner or the Third Party requester must be served on the other party (or parties where two or more Third Party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. The document must reflect service or the document may be refused consideration by the Office. See 37 CFR 1.550(f).

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extension of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

The Patent Owner is reminded of the continuing responsibility under 37 CFR 1.565(a), to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving the instant Patent Under Reexamination or any related patent throughout the course of this reexamination proceeding. The Third Party requester is also reminded of the ability to similarly inform the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

All correspondence relating to this *ex parte* reexamination proceeding should be directed:

By Mail to: Mail Stop *Ex Parte* Reexam

Central Reexamination Unit
Commissioner for Patents
United States Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By hand: Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Signed:

/Christopher E. Lee/

Primary Patent Examiner (Reexamination)
Central Reexamination Unit / Art Unit 3992

Conferees:

ESK

ajr

EXHIBIT 6

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/008,326	11/09/2006	6249876	10414-25	7651

7590 04/07/2008

Bradley J. Bereznak, Esq.
BLAKELY SOKOLOFF TAYLOR & ZAFMAN. LLP
12400 Wilshire Blvd.
Seventh Floor
Los Angeles, CA 90025

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 04/07/2008

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

Sanjeet K. Dutta

ORRICK, HERRINGTON & SUTCLIFFE LLP

1000 Marsh Road

Menlo Park, CA 94025

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/008,326*.

PATENT NO. *6,249,876*.

ART UNIT *3992*.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Office Action in Ex Parte Reexamination	Control No. 90/008,326	Patent Under Reexamination 6249876	
	Examiner Christopher E. Lee	Art Unit 3992	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

a☐ Responsive to the communication(s) filed on _____. b☐ This action is made FINAL.
c☒ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter. Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).** If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☒ Information Disclosure Statement, PTO/SB/08.
3. ☐ Interview Summary, PTO-474.
4. ☐ _____.

Part II SUMMARY OF ACTION

1a. ☒ Claims *1 and 17-19* are subject to reexamination.
1b. ☒ Claims *2-16 and 20-32* are not subject to reexamination.
2. ☐ Claims _____ have been canceled in the present reexamination proceeding.
3. ☐ Claims _____ are patentable and/or confirmed.
4. ☒ Claims *1 and 17-19* are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ The drawings, filed on _____ are acceptable.
7. ☐ The proposed drawing correction, filed on _____ has been (7a)☐ approved (7b)☐ disapproved.
8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All b)☐ Some* c)☐ None of the certified copies have
   1☐ been received.
   2☐ not been received.
   3☐ been filed in Application No. _____.
   4☐ been filed in reexamination Control No. _____.
   5☐ been received by the International Bureau in PCT application No. _____.
   * See the attached detailed Office action for a list of the certified copies not received.
9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.
10. ☐ Other: _____

cc: Requester (if third party requester)

Ex Parte Reexamination

1. This is an *Ex Parte* Reexamination of US 6,249,876 A ("the 876 Patent"). Currently, claims 1 and 17-19 are pending in this *Ex Parte* Reexamination. The claims 2-16 and 20-32 are not subject to reexamination.

Information Disclosure Statement

2. The Information Disclosure Statement filed on 26th of October 2007 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because (1) the references without providing publisher, and/or the references without providing proper page numbers fail to comply with 37 CFR 1.98(b)(5), which requires a publisher, and properly referred pages, and/or (2) the inclusion of the court proceedings as the references in the Information Disclosure Statement. The court proceedings listed in the Information Disclosure Statement have been given due consideration, however, as these are not printed publications per se. The listings on the Information Disclosure Statement have been lined through and these listings will not appear on the Reexamination Certificate.

The *Ex Parte* Reexamination Requester is advised that the date of any re-submission of any item of information contained in the Information Disclosure Statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statements, including all certification requirements for statements under 37 CFR 1.97(e), respectively. See MPEP § 609.05(a).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Martin, Jr. et al. [US 4,638,417; hereinafter "Martin"].

Referring to claim 1, Martin discloses a digital frequency jittering circuit (i.e., power density spectrum controller) for varying the switching frequency of a power supply (i.e., a circuit maintaining the average power of a large number of operating frequencies of the circuit within the dynamic range of the switching mode of a power supply; See col. 1, lines 49-53), comprising:

- an oscillator (i.e., VCO 13 of Figure) for generating a signal (i.e., oscillating signal) having a switching frequency (See col. 2, lines 46-49), the oscillator (i.e., said VCO) having a control input (i.e., input line from D/A 12 in Figure) for varying the switching frequency (See col. 2, lines 39-49);
- a digital to analog converter (i.e., D/A 12 of the Figure) coupled to the control input (i.e., said input line from said D/A) for varying the switching frequency (See col. 2, lines 44-49); and
- a counter (i.e., COUNTER 10 of the Figure) coupled to the output of the oscillator (i.e., feedback line from said VCO in Figure) and to the digital to analog converter (i.e., said COUNTER being coupled to said D/A through EPROM 11 in Figure; See col. 2, lines 39-46), the counter (i.e., said COUNTER) causing the digital to analog converter (i.e., said D/A) to adjust the control input (i.e., said input line from said D/A) and to vary the switching frequency (See col. 2, lines 20-49).

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al. ["Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters," IEEE Transactions on Power Electronics, Vol. 8, No.4 (October 1993) by A.C. Wang and S.R. Sanders, pp. 596-605; hereinafter "Wang"].

Referring to claim 1, Wang discloses a digital frequency jittering circuit (i.e., PWM type power circuit with a time-varying switching frequency) for varying the switching frequency of a power supply (See page 596, I. Introduction, lines 12-15), comprising:

- an oscillator (i.e., internal wave form generator, in fact, Oscillator between D/A and Comparator, said Comparator, and Simple Control Logic in Fig. 20) for generating a signal (i.e., Internal Waveforms in Fig. 19) having a switching frequency (i.e., switching frequency V_{TR} in Fig. 20), the oscillator (i.e., said internal wave form generator) having a control input (i.e., Ramp Slope in Fig. 20) for varying the switching frequency (See page 604, col. 1, lines 2-7);
- a digital to analog converter (i.e., Subperiod Width D/A in Fig. 20) coupled to the control input (i.e., said Ramp Slope being coupled to output line from said Subperiod Width D/A in Fig. 20) for varying the switching frequency (in fact, Counter causing said Subperiod Width D/A to adjust said Ramp Slope and to vary said switching frequency V_{TR} in Fig. 20; See pages 603-604); and
- a counter (i.e., Counter in Fig. 20) coupled to the output of the oscillator (i.e., said Counter being coupled to said internal wave form generator, actually, said Simple Control Logic, in Fig. 20) and to the digital to analog converter (i.e., said Subperiod Width D/A through ROM in Fig. 20), the counter (i.e., said Counter) causing the digital to analog converter (i.e., said Subperiod Width D/A) to adjust the control input (i.e., said

Ramp Slope from said Subperiod Width D/A) and to vary the switching frequency (See Fig. 20 and pages 603-604).

6. Claims 1 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Habetler et al. ["Acoustic Noise Reduction in Sinusoidal PWM Drives Using a Randomly Modulated Carrier," IEEE Transactions on Power Electronics, Vol. 6, No. 3, p.356-363 (published July 1991) by T.G. Habetler and D. M. Divan; hereafter "Habetler"].

Referring to claim 1, Habetler discloses a digital frequency jittering circuit (i.e., random carrier sinusoidal PWM regulator in Fig. 5) for varying the switching frequency of a power supply (i.e., for varying the switching frequency of Inverter; See page 359, IV. Implementation), comprising:

- an oscillator (i.e., Triangle Generator of Fig. 5) for generating a signal (i.e., triangle wave) having a switching frequency (i.e., said Triangle Generator generating said triangle wave with a switching frequency, inherently, in Fig. 5), the oscillator (i.e., said Triangle Generator) having a control input (i.e., input from A/D and Average Slope in Fig. 5) for varying the switching frequency (See page 359, IV. Implementation, lines 19+);
- a digital to analog converter (i.e., A/D, in fact, digital to analog converter, in Fig. 5; See page 359, IV. Implementation, lines 28-30) coupled to the control input (i.e., said input from A/D and Average Slope being coupled to output line from said A/D in Fig. 5) for varying the switching frequency (See page 359, IV. Implementation, lines 19+); and
- a counter (i.e., Counter in Fig. 5) coupled to the output of the oscillator (i.e., said Counter being coupled to said Triangle Generator through Peak Detector in Fig. 5) and to the digital to analog converter (i.e., said A/D through EPROM in Fig. 5), the counter (i.e., said Counter) causing the digital to analog converter (i.e., said A/D) to adjust the control

input (i.e., said input from A/D and Average Slope) and to vary the switching frequency (See Fig. 5 and page 359, IV. Implementation, lines 19+).

Referring to claim 17, Habetler discloses a method for generating a switching frequency (i.e., generating triangle wave having a switching frequency in Fig. 5) in a power conversion system (i.e., random carrier sinusoidal PWM regulator in Fig. 5), comprising:

- generating a primary voltage (i.e., Average Slope, as a primary voltage, is provided to addition circuit in Fig. 5);
- cycling one or more secondary voltage sources to generate a secondary voltage (i.e., feedback signal from Triangle Generator being cycled through Counter, EPROM, and A/D as an output voltage, i.e.; a secondary voltage, in Fig. 5) which varies over time (i.e., this circulated signal is varying over time; See Fig. 5); and
- combining the secondary voltage (i.e., said output voltage from A/D in Fog. 5) with the primary voltage (i.e., said Average Slope) to be received at a control input of a voltage-controlled oscillator (i.e., input of Triangle Generator in Fig. 5) for generating a switching frequency which is varied over time (See page 359, IV. Implementation, lines 19+).

Referring to claim 18, Habetler teaches

- clocking a counter (i.e., Counter of Fig. 5) with the output of the oscillator (i.e., said Counter being clocked by triangle wave generated by Triangle Generator in Fig. 5).

Referring to claim 19, Habetler teaches that

- the primary voltage (i.e., Average Slope, as a primary voltage, is provided to addition circuit in Fig. 5) is V and each of the secondary voltage sources generates a

supplemental voltage lower than V (See page 359, V. Experimental Results, lines 3-7, wherein in fact that there is very little perceivable difference in the triangle wave with and without random modulation, since the instantaneous frequency is varying only slightly, which anticipates that output voltage from A/D is lower that said Average Slope voltage because the perceivable difference in the triangle waves between the conventional modulation and the random modulation is very little. In other words, the minor output voltage from said A/D is added to the major voltage of said Average Slope in Fig. 5), and

- passing the supplemental voltage to the voltage-controlled oscillator (i.e., said output voltage from A/D being passed to Triangle Generator for random carrier PWM regulation in Fig. 5; See page 359, IV. Implementation and V. Experimental Results).

NOTICE RE PATENT OWNER'S CORRESPONDENCE ADDRESS

Effective May 16, 2007, 37 CFR 1.33(c) has been revised to provide that:

The Patent Owner's correspondence address for all communications in an *ex parte* reexamination or an *inter partes* reexamination is designated as the correspondence address of the patent.

> Revisions and Technical Corrections Affecting Requirements for *Ex Parte* and *Inter Partes* Reexamination, 72 FR 18892 (April 16, 2007)(Final Rule)

The correspondence address for any pending reexamination proceeding not having the same correspondence address as that of the patent is, by way of this revision to 37 CFR 1.33(c), automatically changed to that of the patent file as of the effective date.

This change is effective for any reexamination proceeding which is pending before the Office as of May 16, 2007, including the present reexamination proceeding, and to any reexamination proceeding which is filed after that date.

Parties are to take this change into account when filing papers, and direct communications accordingly.

In the event the Patent Owner's correspondence address listed in the papers (record) for the present proceeding is different from the correspondence address of the patent, it is strongly encouraged that the patent owner affirmatively file a Notification of Change of Correspondence Address in the reexamination proceeding and/or the patent (depending on which address Patent

Owner desires), to conform the address of the proceeding with that of the patent and to clarify the record as to which address should be used for correspondence.

Telephone Numbers for reexamination inquiries:

Reexamination and Amendment Practice	(571) 272-7703
Central Reexam Unit (CRU)	(571) 272-7705
Reexamination Facsimile Transmission No.	(571) 273-9900

Conclusion

The Patent Owner is reminded that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j).

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116, after final rejection and 37 CFR 41.33 after appeal, which will be strictly enforced.

After filing of a request for *ex parte* reexamination by a Third Party requester, any document filed by either the Patent Owner or the Third Party requester must be served on the other party (or parties where two or more Third Party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. The document must reflect service or the document may be refused consideration by the Office. See 37 CFR 1.550(f).

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extension of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

The Patent Owner is reminded of the continuing responsibility under 37 CFR 1.565(a), to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving the instant Patent Under Reexamination or any related patent throughout the course of this reexamination proceeding. The Third Party requester is also reminded of the ability to similarly inform the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

All correspondence relating to this *ex parte* reexamination proceeding should be directed:

By Mail to:	Mail Stop *Ex Parte* Reexam Central Reexamination Unit Commissioner for Patents United States Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450
By FAX to:	(571) 273-9900 Central Reexamination Unit
By hand:	Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Signed:

/Christopher E. Lee/

Primary Patent Examiner (Reexamination)
Central Reexamination Unit / Art Unit 3992

Conferees:

ESK

GWN

EXHIBIT 7

ORRICK

ORRICK, HERRINGTON & SUTCLIFFE LLP
1000 MARSH ROAD
MENLO PARK, CALIFORNIA 94025
tel 650-614-7400
fax 650-614-7401
WWW.ORRICK.COM

June 19, 2008

Bas de Blank
(650) 614-7343
basdeblank@orrick.com

VIA FACSIMILE

Howard G. Pollack
Fish & Richardson P.C.
500 Arguello Street, Suite 500
Redwood City, CA 94063

Re: Power Integrations v. Fairchild Semiconductor et al.

Dear Howard:

Thank you for agreeing to the extension for Fairchild and System General to respond to the complaint. For us to respond, however, we need further information about Power Integrations' allegations. Specifically, an identification of the asserted claims and the accused products.

This information is particularly necessary since two of the three asserted patents and a number of the Fairchild devices have already been litigated. Thus, we are unsure whether Power Integrations seeks to assert the same claims, accuse the same products, or means something else.

We would appreciate what information you can provide so that we can respond to the complaint and begin to gather the documents and information to be produced. Should you have any questions, please do not hesitate to call.

Sincerely,

Bas de Blank

Bas de Blank

cc: William J. Marsden, Jr.
Michael Headley

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	0303
RECIPIENT ADDRESS	98395071
DESTINATION ID	
ST. TIME	06/19 12:57
TIME USE	00'59
PAGES SENT	2
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ORRICK

ORRICK, HERRINGTON & SUTCLIFFE LLP
1000 MARSH ROAD
MENLO PARK, CALIFORNIA 94025
tel 650-614-7400
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FAX TRANSMISSION

DATE June 19, 2008

NO. OF PAGES (INCLUDING COVER SHEET) 2

FROM

name	tel
Bas de Blank	650-614-7343

TO

name	company/firm	tel	Fax
Howard Pollack	FISH & RICHARDSON P.C.		650.839.5071

CC

William J. Marsden, Jr.	FISH & RICHARDSON P.C.	302.652-0607
Michael R. Headley	FISH & RICHARDSON P.C.	650.839.5071

RE *Power Integrations v. Fairchild Semiconductor et al*

MESSAGE

Please see attached.

****
*** MULTI TX/RX REPORT ***
****

TX/RX NO 0302
PGS. 2
TX/RX INCOMPLETE
(1) 8395071
TRANSACTION OK
(2) 913026520607
ERROR INFORMATION

ORRICK

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FAX TRANSMISSION

DATE June 19, 2008

NO. OF PAGES (INCLUDING COVER SHEET) 2

FROM

name	*tel*
Bas de Blank	650-614-7343

TO

name	*company/firm*	*tel*	*Fax*
Howard Pollack	FISH & RICHARDSON P.C.		650.839.5071

CC

William J. Marsden, Jr.	FISH & RICHARDSON P.C.	302.652-0607
Michael R. Headley	FISH & RICHARDSON P.C.	650.839.5071

RE *Power Integrations v. Fairchild Semiconductor et al*

MESSAGE

Please see attached.

EXHIBIT 8

ORRICK, HERRINGTON & SUTCLIFFE LLP
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June 27, 2008

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basdeblank@orrick.com

VIA FACSIMILE

Howard G. Pollack
Fish & Richardson P.C.
500 Arguello Street, Suite 500
Redwood City, CA 94063

Re: Power Integrations v. Fairchild Semiconductor et al.

Dear Howard:

On June 19, 2008, I wrote requesting additional information about the asserted claims and accused products at issue in Power Integrations' latest suit. I have not received any response. As I previously explained, this information is necessary for us to respond to the complaint in a meaningful way since two of the three asserted patents were already litigated between the parties and are being reexamined by the Patent Office. Thus, we are at a loss to understand whether Power Integrations is asserting the same claims it previously litigated (and that have been rejected by the Patent Office) or different claims. Similarly, we do not understand whether Power Integrations is accusing the same products at issue in the previous litigation or new products.

We assume that Power Integrations had a good faith basis in filing this complaint and, thus, can identify the asserted claims and accused products. If so, we would appreciate this information (which we would receive in discovery) so that we can begin to collect responsive documents and prepare our response to the complaint. If Power Integrations either does not have or refuses to provide this information, we would appreciate at least the courtesy of a response. Should you have any questions, please do not hesitate to call.

Sincerely,

Bas de Blank

Bas de Blank

cc: William J. Marsden, Jr.
Michael Headley

****
*** MULTI TX/RX REPORT ***
****

TX/RX NO 0309
PGS. 2
TX/RX INCOMPLETE

TRANSACTION OK

(1) 98395071
(2) 913026520607

ERROR INFORMATION

ORRICK

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FAX TRANSMISSION

DATE June 27, 2008

NO. OF PAGES (INCLUDING COVER SHEET) 2

FROM

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TO

name	company/firm	tel	Fax
Howard Pollack	FISH & RICHARDSON P.C.		650.839.5071

CC

William J. Marsden, Jr.	FISH & RICHARDSON P.C.		302.652-0607
Michael R. Headley	FISH & RICHARDSON P.C.		650.839.5071

RE *Power Integrations v. Fairchild Semiconductor et al*

MESSAGE

Please see attached.

EXHIBIT 9

FISH & RICHARDSON P.C.

500 Arguello Street
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94063-1526

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Date June 30, 2008

To Bas de Blank
Orrick, Herrington & Sutcliffe LLP
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Menlo Park, CA 94025
Telephone: (650) 614-7400

Facsimile number 10256-01853531 / (650) 614-7401

From Michael R. Headley

Re Power Integrations v. Fairchild II

Number of pages including this page 3

Message Please see attached correspondence.

FISH & RICHARDSON P.C.

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Frederick P. Fish
1855-1930

W.K. Richardson
1859-1951

VIA FACSIMILE & U.S. MAIL
650/614-7401

June 30, 2008

Bas de Blank
Orrick, Herrington & Sutcliffe LLP
1000 Marsh Road
Menlo Park, CA 94025

Re: *Power Integrations v. Fairchild II*
USDC-D. Del. - C.A. No. 08-309 JJF

AUSTIN
BOSTON
DALLAS
DELAWARE
NEW YORK
SAN DIEGO
SILICON VALLEY
TWIN CITIES
WASHINGTON, DC

Dear Bas:

I received your letters requesting additional information regarding the complaint Power Integrations recently filed against Fairchild and its wholly-owned subsidiary, System General (SG), relating to Power Integrations' frequency jitter patents and its output power limit patent. We do not understand why you believe you need more information to respond to the complaint. Since Fairchild litigated the frequency jitter patents for years and was found to infringe them, it clearly is aware of the scope and construction of the claims and how they are infringed. Fairchild also bought SG (itself an adjudged infringer) and has continued to infringe, not only by continuing to sell infringing products of its own design, but by selling products bearing SG part designations and/or products cross-designated as Fairchild-SG parts. Moreover, Fairchild has challenged Power Integrations' ability, in the first suit, to collect damages for infringement based on sales of Fairchild products which were previously found to infringe but which were sold after the date of the last jury verdict in the earlier case. To the extent damages are not awarded for sales of adjudged infringing products for some post-verdict time period in that prior case, those infringing sales will properly be part of the dispute in this new case.

We are not going to engage in a protracted discussion regarding part numbers with you at this time, though, as Fairchild's discovery obfuscations during the earlier case – for example, the game Fairchild attempted to play with the "HD" part – has amply demonstrated the need to address infringement more broadly, and because Fairchild, not Power Integrations, knows all the specific numbers for those parts with the infringing functionality. Suffice to say we are accusing of infringement all Fairchild/SG parts that use the patented features, specifically those products with "frequency jitter" (or "dither" or "hopping", or however Fairchild chooses to label it) and/or an output power limit feature using a variable current limit signal (sometimes referred to in Fairchild/SG documents as a "Vlimit ramp"), regardless of the part numbers and/or suffixes Fairchild/SG now uses. Representative claims include '876 patent claim 1, '851 patent claim 11, and '270 patent claim 6. Other claims will be identified in due course during discovery.

FISH & RICHARDSON P.C.

If Fairchild/SG has any defenses, bearing in mind the collateral estoppel effect of the prior litigation, it should plead them. No information Power Integrations can provide at this point should change the nature of your defenses, particularly given your familiarity with your own parts and at least the frequency jitter patents from your previously unsuccessful attempts to invalidate them. Power Integrations is not, of course, seeking double-recovery for any specific infringement of its patents that would be encompassed within the damages award ultimately entered in the prior litigation.

Sincerely,

Michael R. Headley

50495437.doc

EXHIBIT 10

5245 Hellyer Ave.
San Jose, CA 95138
Tel: (408) 414-9608
Fax: (408) 414-9708

May 27, 2008

Dear Customer,

Power Integrations has initiated a new lawsuit against Fairchild Semiconductor ("Fairchild") and its subsidiary System General Corporation ("SG") for infringement of several Power Integrations patents related to integrated frequency jitter and output power limiting features. In a prior lawsuit, Fairchild was found to willfully infringe several Power Integrations patents, and a jury confirmed the validity of those patents (including two of the frequency jitter patents involved in this new suit). In another case, SG was found to infringe other Power Integrations patents, and the ITC issued an exclusion order barring the importation of products containing certain SG parts into the U.S.

Power Integrations has spent considerable time, effort, and resources in developing its award-winning, patented technologies. These technologies enable the delivery of advanced, innovative power supply solutions. Power Integrations has obtained more than 200 U.S. patents and 90 foreign patents. We expect others to respect Power Integrations' intellectual property just as we respect the legitimate intellectual property of others.

1) In the new lawsuit, we believe at least the following Fairchild (SG) parts infringe our patents:

SGP100	SGP400	SG6842J
SG6842JHV	SG6848	SG6849
SG6849A	SG6850	SG6858
SG6859	SG6859A	SG6860
SG5701	SG5841	SG5841J
SG5842	SG5842J	SG5848
SG6741	SG6742	FSEZ1216

Any customer using these products in designs for end products imported into, offered for sale, or sold in the U.S. will potentially be subject to liability for patent infringement. Power Integrations has no plans to initiate any action against any of its customers, but we want you to be aware of the potential ramifications of continued use of infringing Fairchild (SG) parts in your designs.

2) The US ITC (International Trade Commission) exclusion order barring the importation of products containing certain Fairchild (SG) parts remains in place. The following products are subject to the exclusion order:

SG6840	SG6841	SG6841x3
SG6842	SG6842J	SG6843

3) The following Fairchild products were also found to infringe in the previous litigation and continue to infringe one or more of our patents:

FSD200	FSDH321L	FSDH0265RL
FSD200B	FSDL0165RN	FSDL0365RL
FSD210	FSDM0265RN	FSDM0365RL
FSD210B	FSDM0265RNB	FSDM311
FSD210H	FSDH0265RN	FSCM0565R
FSD210HD	FSDL0365RN	FSCM0765R
FSD211	FSDL0365RNB	
FSD500	FSDM0365RN	
FSDL321	FSDM0365RNB	
FSDL321L	FSDL0165RL	
FSDH321	FSDM0265RL	

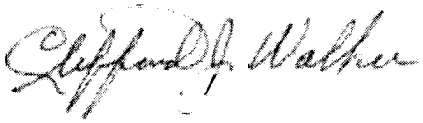
Fairchild has also notified the Court and Fairchild's customers that the following additional parts are similar to the above parts and would also be covered by an injunction that issues:

FAN7602	FSD200BMX	FSDH321LX_NL
FSCM0456RGWDTU	FSD210BH	FSDH321Z
FSCM0465R	FSD210BM	FSDH321Z_NL
FSCM0465RIWDTU	FSD210BM_NL	FSDL0165RL_NL
FSCM0465RJ	FSD210BMX	FSDL0365RL_NL
FSCM0465RJX	FSD210BMX_SB82110	FSDL321_NL
FSCM0565RCYDTU	FSD210DH	FSDL321L_NL
FSCM0565RCYDTU_NL	FSD210HD_NL	FSDM0170RNB
FSCM0565RD	FSD210L	FSDM0265RL_NL
FSCM0565RGTU	FSD200BM_NL	FSDH321LX
FSCM0565RGWDTU	FSD211H	FSDM0265RN_NL
FSCM0565RIWDTU	FSD211H_NL	FSDM0265RNB_NL
FSCM0565RJ	FSDH0170RNB	FSDM0265RNC
FSCM0565RJX	FSDH0265RL_NL	FSDM0265RNC_NL
FSCM0765RC	FSDH0265RL_SB82109	FSDM0270RNB
FSCM0765RCYDTU	FSDH0265RLD	FSDM0365RL_NL
FSCM0765RCYDTU_NL	FSDH0265RLD_NL	FSDM0365RLX
FSCM0765RD	FSDH0265RLDX	FSDM0365RN_NL
FSCM0765RGWDTU	FSDH0265RLDX_NL	FSDM0365RNC
FSCM0765RIWDTU	FSDH0265RLN	FSDM0370RNB
FSCM0765RJ	FSDH0265RLN_NL	FSDM100
FSCM0765RJX	FSDH0265RLX	FSDM100_NL
FSD1000	FSDH0265RLX_SB82190	FSDM101
FSD200_NL	FSDH0270RNB	FSDM311_NL
FSD200B_NL	FSDH0370RNB	FSDM311L
FSD200BM	FSDH321B	FSDM311L_NL

Despite these continued violations of Power Integrations' intellectual property, Power Integrations remains a leader in power supply technology. We have sold billions of chips ultimately saving consumers and businesses an estimated $2.8 billion on their electricity bills and preventing more than an estimated 18 million tons of CO_2 emissions.

Power Integrations looks forward to working with you to deliver the next generation of highly efficient, energy-saving devices. If you have any questions, please contact our Sales team.

Sincerely;



Clifford J. Walker
Vice President of Corporate Development